



**NY Power
Authority**

**Canal
Corporation**

**MINUTES OF THE REGULAR JOINT MEETING
OF THE
POWER AUTHORITY OF THE STATE OF NEW YORK AND
NEW YORK STATE CANAL CORPORATION**

October 2, 2018

Table of Contents

<u>Subject</u>	<u>Page No.</u>	<u>Exhibit</u>
Introduction	2	
1. Adoption of the October 2, 2018 Proposed Meeting Agenda	3	
2. Motion to Conduct an Executive Session	4	
3. Motion to Resume Meeting in Open Session	5	
4. CONSENT AGENDA:	6	
a. Governance Matters	7	
i. Minutes of the Regular Joint Meeting of the New York Power Authority's Trustees and Canal Corporation's Board of Directors held on August 7, 2018	7	
ii. Appointment of Executive Vice President and Chief Commercial Officer	8	
b. Rate Making	9	
i. Decrease in Westchester County Governmental Customer Rates – Notice of Proposed Rulemaking	9	
c. Power Allocations	12	
i. Extension of the Industrial Incentive Award to Pratt Paper (NY), Inc. and Economic Development Plan	12	
d. Procurement (Services) Contracts	16	
i. Procurement (Services) and Other Contracts – Business Units and Facilities – Awards, Extensions and/or Additional Funding	16	4d i-A 4d i-B
ii. Procurement (Services) Contract – Digital Utility Strategic Partnership – Data Analytics – Contract Awards	21	

<u>Subject</u>	<u>Page No.</u>	<u>Exhibit</u>
e. Finance	24	
i. Release of Funds in Support of the New York State Canal Corporation	24	
ii. North Country Energy Storage Project – Funding Approval for Preliminary Development	27	
iii. Approval of the Budget Report for Submission Pursuant to Section 2801 of the Public Authorities Law and Agency Procedures	29	4e iii-A
f. Real Estate	31	
i. Amendment of Office Space Lease - 30 South Pearl Street, Albany, New York	31	
g. Naming of the 500-MW Combined Cycle Plant in Honor of Eugene W. Zeltmann	33	
h. Canal Corporation	36	
i. Procurement (Services) Contract - East Guard Lock Rehabilitation on the Erie Canal - Contract Award	36	
5. DISCUSSION AGENDA:	38	
a. Strategic Initiatives	38	
i. President and Chief Executive Officer's Report	38	5a i-A
b. Financial Operations	39	
i. Chief Financial Officer's Report	39	5b i-A
c. Utility Operations	40	
i. Chief Operations Officer's Report	40	
1. Smart Generation & Transmission Strategic Initiative - Sensor Deployment Program - Capital Expenditure Authorization Request and Contract Award Resolution	41	
2. Smart Generation & Transmission Strategic Initiative - Communication Backbone Program – Phase 2 - Capital Expenditure Authorization Request Resolution	45	

<u>Subject</u>	<u>Page No.</u>	<u>Exhibit</u>
3. Moses-Adirondack Smart Path Reliability Project – Phase II - Capital Expenditure Authorization Request Resolution	48	
4. Clark Energy Center - Utica Visitors Center - Capital Expenditure Authorization Request and Contract Award Resolution	51	
5. Procurement (Services) Contracts - On-Call Program/Project Management Services Master Service Agreements - Additional Funding Authorization Request -- Resolution	54	
6. Procurement (Services) Contract - Transmission and Distribution (T&D) Emergency Response and Management Services - Contract Awards -- Resolution	56	
d. Commercial Operations	60	
i. Chief Commercial Officer's Report	60	5d i-A
1. Economic Development Allocations and Awards:	62	
a. Annual Compliance Review – Expansion Power, Replacement Power and Preservation Power Hydropower Programs Resolution	62	5d i-1a-A - 5d i-1a-D
b. Proposed Extension of Recharge New York Power Allocations Resolution	67	5d i-1b-A - 5d i-1b-C
c. Proposed Extension of WNY Hydropower Allocations; Further Authorization Related to Compliance with State Energy Plan and Related State Energy Standards Resolution	74	5d i-1c-A - 5d i-1c-C
d. Award of Fund Benefits from the Northern New York Economic Development Fund Recommended by the Northern New York Power Proceeds Allocation Board Resolution	82	5d i-1d-A - 5d i-1d-A
2. Moonshot	86	
a. Procurement (Services) Contract – Electric Vehicle Supply Equipment – Contract Award Resolution	86	

<u>Subject</u>	<u>Page No.</u>	<u>Exhibit</u>
b. Moonshot Update	90	5d i-2b-A
6. Board Committee Reports:	92	
a. Finance Committee Report	92	
b. Governance Committee Report	93	
7. Next Meeting	94	
Closing	95	

October 2, 2018

Minutes of the regular joint meeting of the New York Power Authority and Canal Corporation held, via video conference, at the Clarence D. Rappleyea Building at 123 Main Street, White Plains, New York at approximately 9:26 a.m.

Members of the Boards present were:

John R. Koelmel, Chairman
Eugene L. Nicandri, Vice Chairman
Tracy McKibben
Michael A.L. Balboni
Dennis G. Trainor
Dr. Anne M. Kress - Rochester
Anthony J. Picente, Jr. - CEC

Gil Quiniones	President and Chief Executive Officer
Justin Driscoll	Executive Vice President and General Counsel
Joseph Kessler	Executive Vice President and Chief Operating Officer
Robert Lurie	Executive Vice President and Chief Financial Officer
Sarah Salati	Executive Vice President and Chief Commercial Officer
Lee Garza	Senior Vice President – Financial Operations & Acting Controller
Angela Gonzalez	Senior Vice President – Internal Audit
Kimberly Harriman	Senior Vice President – Public & Regulatory Affairs
Soubhagya Parija	Senior Vice President and Chief Risk Officer
Robert Piascik	Senior Vice President and Chief Information Officer
Kristine Pizzo	Senior Vice President – Human Resources
Karen Delince	Vice President and Corporate Secretary
Richard Allen	Vice President – Project and Business Development
John Canale	Vice President – Strategic Supply Management
Kenneth Carnes	Vice President – Critical Secure Services & CISO
Ruth Colon	Vice President – Enterprise Shared Services
Ricardo DaSiva	Vice President – Strategic Operations
Keith Hayes	Vice President – Economic Development
Joseph Leary	Vice President – Community & Government Relations
Patricia Lombardi	Vice President – Project Management
Doug McMahon	Vice President – Strategy
Daniella Piper	Vice President – Digital Transformation Office / Acting Chief of Staff
Ethan Riegelhaupt	Vice President – Corporate Communications
Javier Bucobo	Principal Attorney II – Contracts, Licensing & Environments
John Markowitz	Lead Energy Services Product Development Engineer
Marie Berninger	Director – Business Development
Mario Roefaro	Director – Community Affairs
Ana Stachowiak	Project Manager – EPCM
Mary Cahill	Manager – Executive Office
Steve Gosset	Manager – Media Relations
Gerard McLoughlin	Manager – Business Power Allocations & Compliance
Lorna Johnson	Senior Associate Corporate Secretary
Sheila Quatrocci	Senior Assistant Corporate Secretary
Jaiah Gottor	Manager – Network Services – Infrastructure
Joseph Rivera	Network Architect – Infrastructure
Glenn Martinez	Senior Network Analyst – Infrastructure
Howard Goebel	Director - Waterway Management - Canal
Randy Kreis	Consultant
Kate Ascher	Consultant - BuroHappold Engineering
Shivan Jumani	Consultant - Buro Happold Engineering

Chairman Koelmel presided over the meeting. Corporate Secretary Delince kept the Minutes.

Introduction

Chairman Koelmel welcomed the Board and staff members who were present at the meeting. He said that the meeting had been duly noticed as required by the Open Meetings Law and called the meeting to order pursuant to the Authority's Bylaws, Article III, Section 3.

1. **Adoption of the October 2, 2018 Proposed Meeting Agenda**

Upon motion made by Member Dennis Trainor and seconded by Vice Chairman Nicandri, the meeting Agenda was adopted.

Conflicts of Interest

Member Anne Kress declared conflicts of interest as indicated below and said she would not participate in the discussion or vote as it relates to those matters.

- *M&T Bank (5ei-1a)*
- *Corning, Inc.; JPMorgan Chase; Zweigles (5ei-1b)*
- *M&T Bank (5ei-c)*

Chairman Koelmel, Vice Chairman Nicandri and Members Anthony Picente, Tracy McKibben, Michael Balboni and Dennis Trainor declared no conflicts of interest based on the list of entities previously provided for their review.

2. **Motion to Conduct an Executive Session**

Mr. Chairman, I move that the Board conduct an executive session to discuss financial and credit history of a particular corporation and matters leading to the appointment, employment, promotion, demotion, discipline, suspension, dismissal or removal of a particular person or corporation, pursuant to §105f of the Public Officers Law. Upon motion made by Member Dennis Trainor and seconded by Member Tracy McKibben, the members held an executive session.

3. **Motion to Resume Meeting in Open Session**

Mr. Chairman, I move to resume the meeting in Open Session. Upon motion made by Vice Chairman Nicandri and seconded by Member Dennis Trainor, the meeting resumed in Open Session.

Chairman Koelmel said no votes were taken during the Executive Session.

4. CONSENT AGENDA:

Upon motion made by Member Michael Balboni and seconded by Member Dennis Trainor, the members approved the Consent Agenda.

a. Governance Matters:

i. Approval of the Minutes

The Minutes of the Regular Joint Meeting of the New York Power Authority's Board of Trustees and Canal Corporation's Board of Directors held on August 7, 2018 were unanimously adopted.

ii. **Appointment of Executive Vice President and Chief Commercial Officer**

The President and Chief Executive Officer submitted the following report:

"SUMMARY

The NYPA Trustees and the Canal Corporation's Board of Directors are requested to approve the resolution below appointing the following officer of the Authority, effective immediately:

- Sarah Salati, Executive Vice President and Chief Commercial Officer, with an annual salary of \$240,000.00.

BACKGROUND AND DISCUSSION

The appointment of officers is governed by the Authority's By-laws, Article IV, which provides that officers shall be appointed by formal resolution adopted by the Trustees upon the recommendation of the Governance Committee. Article IV further provides that officers shall hold office until his/her successor is chosen and qualified or his/her earlier removal, resignation or death.

FISCAL INFORMATION

None.

RECOMMENDATION

For the reasons stated, the Governance Committee recommends that the Trustees and Board of Directors approve the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Boards appoint Sarah Salati to the office of Executive Vice President and Chief Commercial Officer, with an annual salary of \$240,000.00, effective immediately; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, and all other officers are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents necessary to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

b. Rate Making:

i. Decrease in Westchester County Governmental Customer Rates – Notice of Proposed Rulemaking

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve a Notice of Proposed Rulemaking ('NOPR') to decrease the production rates by 17.98% as compared to 2018 rates for the Westchester County Governmental Customers ('Customers').

In addition, the Trustees are requested to direct the Corporate Secretary to file the NOPR with the New York State Department of State for publication in the New York *State Register* in accordance with the requirements of the State Administrative Procedure Act ('SAPA'). Following the publication of this NOPR in the *State Register*, the 60-day public comment period will begin on October 17, 2018 and close on December 16, 2018.

Although rates are projected to decrease, since the proposed decrease includes an increase to the Fixed Costs by more than 2.0%, a public forum will be held in accordance with the Authority's policy. The Trustees' authorization is also requested to direct the Corporate Secretary to provide all appropriate notice for such public forum.

Upon closure of the aforementioned public comment period, Authority staff will take into consideration any concerns that have been raised and return to the Trustees at their January 2019 meeting to seek final adoption of this proposal.

BACKGROUND

The Authority provides electricity to governmental customers in Westchester County, which includes the County of Westchester, school districts, housing authorities, cities, towns and villages. The County of Westchester is the largest single customer in this group, accounting for about one-third of total sales.

The basis of providing service is contained in the Supplemental Electricity Agreements ('Agreements') with the Customers. The Agreements were approved by the Trustees at their December 19, 2006 meeting and were signed by each of the Customers. Among other things, the Agreements permit the Authority to modify the Customers' rates (for Rate Years subsequent to 2007) at any time based on a fully supported pro forma Cost of Service ('COS') subject to Customer review and comment and compliance with the SAPA process, and allow the Authority to apply an Energy Charge Adjustment ('ECA') mechanism to the Customers' bills each month.

The current 2018 base production rates were adopted by the Trustees at their December 12, 2017 meeting when they approved a 9.44% decrease over the 2017 rates. Staff is proposing another rate decrease for 2019, which is largely due to lower purchase power expense.

The Authority's policies and procedures call for a public forum if the Fixed Costs component of the proposed rate change exceeds a 2.0% increase. Since the proposed increase is greater than 2.0%, Authority staff recommends that a public forum be held. A public forum allows the Customers an additional opportunity to voice their concerns regarding the increase in the proposed 2018 Fixed Costs component. Trustee authorization is also requested to direct the Corporate Secretary to provide all appropriate notice for such public forum.

DISCUSSION

Consistent with the Authority's past rate-making practices and with the rate-setting process set forth in the Agreements, the proposed production rate decrease is based on a *pro forma* COS for next year. The Preliminary 2019 COS for the Westchester Customers is \$26.91 million, compared to \$30.13 million in 2018.

The Fixed Costs component will increase slightly in 2019, from \$1.29 million to \$1.47 million, an approximate \$0.19 million or 14.4% increase as compared to the Final 2018 COS. This increase is primarily driven by an increase in Shared Services expense due to an increase in headquarter-based non-recurring projects. Pursuant to the Authority's policies and procedures, this increase in Fixed Costs is subject to a public forum.

Offsetting the increase in Fixed Costs, the Variable Costs component is projected to decrease from \$28.84 million to \$25.44 million, an approximate \$3.40 million or 11.8% decrease as compared to those costs included in the rates that are currently in effect. The primary cost element, Energy Purchase Power cost, is \$17.92 million and accounts for 67% of the total production costs. Although these Customers receive a pro-rated share of energy revenues from the small hydro generation facilities, their energy requirements are purchased from the market (in NYISO Zones 'A' (Western New York), 'D' (Northern New York) and 'G' (Hudson Valley)). The 2019 Energy Purchase Power costs are expected to decrease by \$3.77 million as compared to those prices projected for 2018 and incorporated into the rates that are currently in effect. This decrease is primarily driven by an expected \$3.06 million decrease in Zone G 2019 prices. Slightly offsetting the \$3.77 million decrease is a \$0.87 million decrease in net Transmission Congestion Contracts ('TCC') revenues, as a result of a \$0.8 million decrease in expected TCC rents.

Applying current rates to the 2019 Customer sales forecast results in projected revenues of \$32.81 million, representing an over-collection of \$5.90 million from the Customers. Therefore, staff is proposing a 17.98% decrease in base production rates.

Under SAPA, there is a 60-day public comment period on the rate change. At the close of the comment period, Authority staff will review any comments which have been filed and, if warranted, staff will make any necessary changes to the proposed rates to address any concerns raised. Staff will return to the Trustees at their January 2019 meeting to request an approval of the final production rate modification, to become effective with the January 2019 billing period. Subsequent to the approval of this proposed action by the Trustees, the Final Staff Report containing the Final 2019 COS will be made available to the Customers.

FISCAL INFORMATION

The proposed production rates are cost-based, and with the application of the Energy Charge Adjustment mechanism, staff anticipates that the Authority will recover all costs incurred in serving the Customers.

RECOMMENDATION

The Vice President – Finance and the Director – Revenue and Pricing Analysis recommend that the Trustees authorize the Corporate Secretary to file a Notice of Proposed Rulemaking in the New York *State Register* for the adoption of a production rate decrease applicable to the Westchester County Governmental Customers.

It is also recommended that the Vice President – Finance, or his designee, be authorized to issue written notice of the proposed action to the affected Customers under the provisions of the Authority's tariffs.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.”

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Vice President – Finance, or his designee, be, and hereby is, authorized to issue written notice to the affected Customers of this proposed action by the Trustees for a projected 17.98% decrease in the production rates applicable to the Westchester County Governmental Customers as set forth in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Corporate Secretary of the Authority be, and hereby is, directed to file such notices as may be required with the Secretary of State for publication in the New York *State Register* and to submit such other notice as may be required by statute or regulation concerning the proposed revenue collection decrease, and proposed tariff modification; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

c. Power Allocations

i. Extension of the Industrial Incentive Award to Pratt Paper (NY), Inc. and Economic Development Plan

The President and Chief Executive Officer submitted the following report:

"SUMMARY"

The Trustees are requested to:

- 1) approve an extension, from June 1, 2018 to May 31, 2019, of the Economic Development Plan ('Plan') covering the use of net revenues produced by the sale of Expansion Power ('EP') to provide electric bill discounts in the form of an Industrial Incentive Award ('IIA') to manufacturing companies located in New York State that are at risk of closure or relocation to another state;
- 2) authorize submission to the Economic Development Power Allocation Board ('EDPAB') of a request to approve such extension; and
- 3) approve a one-year extension, from June 1, 2018 to May 31, 2019, of the term of the IIA previously awarded to Pratt Paper (NY), Inc. ('Pratt') in the amount of up to \$1 million in connection with its Staten Island operations, contingent upon EDPAB's approval of an extension of the Plan.

BACKGROUND

Public Authorities Law ('PAL') §1005 (eighth unnumbered paragraph) directs the Authority to identify 'net revenues' produced by the sale of EP and, further, to identify an amount of such net revenues that will be used solely for IIAs. The Authority is directed in Section 1005 to identify net revenues available for IIAs no less often than annually. Net revenues are defined by PAL §1005 as any excess of revenues properly allocated to the sales of EP over costs and expenses properly allocated to such sales.

IIAs are to be made in conformance with an economic development plan covering all such 'net revenues.' The Authority submits a plan to EDPAB pursuant to Economic Development Law ('EDL') §188, which also provides for EDPAB's approval of the plan upon its determination that such plan is consistent with, among other things, the economic development criteria provided for in EDL §§184 and 185 that evaluate applications for certain power.

At its October 26, 2009 meeting, EDPAB approved a Plan that allows the use of net revenues from the sale of EP for the calendar years of 2008 up, through and including 2016 to provide electric bill discounts to manufacturing companies located in New York State that are at identifiable risk of closing or relocating to another state. EDPAB subsequently approved an extension to the Plan allowing the use of net revenues from the sale of EP through May 31, 2018.

At its May 21, 2013 meeting, the Trustees authorized an IIA to Pratt upon determining that Pratt had demonstrated it meets the qualifying criteria for an IIA and after careful consideration of Pratt's business case. The Trustees approved an annual amount of up to \$1 million per year for up to five (5) years.

Pratt operates a paper mill, a corrugated box factory and a sorting facility in Staten Island within Consolidated Edison's service territory. Manufacturing processes represent a substantial portion of Pratt's total electricity consumption, and energy costs are a primary consideration for the economic viability of the plant. Pratt's IIA, in the form of a cent per kWh price discount applied to a level of annual electric consumption, was approved subject to, among other appropriate terms and conditions:

- Reevaluation and reduction should Pratt's electric rates decline during the term of the IIA.
- The availability of EP net revenue funding for IIAs, which is in NYPA's sole discretion.
- Appropriate determination(s) by the Trustees that the funding of IIAs in any fiscal year will not have a significant impact on the Authority's finances.
- A reduction in the amount of the IIA if Pratt does not meet agreed-upon job commitments (256 full-time employees) at the Staten Island facility.
- An agreement providing for the IIA and which address these and other appropriate terms and conditions in a form satisfactory to the Authority.

The Authority executed an agreement with Pratt ('Agreement') providing for the terms and conditions applicable to the Pratt IIA. The Agreement provided for an initial one-year term for the IIA and an extension of the IIA for four subsequent one-year terms at the Authority's discretion subject to conditions specified in the Agreement. As approved by the Trustees and in accordance with the Agreement, Pratt was eligible to receive up to \$1 million for each year and has received \$1 million for each year of the IIA for a total of \$5 million.

At the completion of each annual term, a compliance review and due diligence was performed on the terms and conditions of the Agreement prior to offering each subsequent annual term. Pratt has been compliant for each annual term, most recently employing an average of 256 persons at its facility during the fifth and final annual term ending May 31, 2018.

DISCUSSION

As the fifth and final year of the IIA drew to a close this May, Pratt requested an extension of the IIA. Upon review of Pratt's current business case, staff determined that Pratt continues to meet the IIA requirements of being a manufacturing company at risk of closing or curtailing operations, and continues to be negatively impacted by high electricity costs within Consolidated Edison's service territory which threatens the economic viability of operations at its Staten Island facility. An extension of the IIA would support Pratt's ability to maintain the committed employment level of 256 jobs at its facility. The Authority and Pratt reached agreement on an offer to extend the IIA contingent upon necessary Trustee and EDPAB approvals.

Accordingly, the Trustees are requested to:

- 1) approve an extension, from June 1, 2018 to May 31, 2019, of the Plan covering the use of net revenues produced by the sale of EP to provide electric bill discounts in the form of an IIAs to manufacturing companies located in New York State that are at risk of closure or relocation to another state;
- 1) authorize submission to EDPAB of a request to approve an extension, from June 1, 2018 to May 31, 2019, of the Plan; and
- 2) approve a one-year extension, from June 1, 2018 to May 31, 2019, of the term of the IIA previously awarded to Pratt in the amount of up to \$1 million in connection with its Staten Island operations, contingent upon EDPAB's extension of the Plan as described above.

FISCAL INFORMATION

IIAs awards may only be paid if sufficient net revenues are produced by the sale of EP. Given that such net revenues and associated awards are anticipated in each year's budget, extension of the Plan from June 1, 2018 through May 31, 2019 to accommodate an additional year of IIA benefits will not have a significant impact on the Authority's finances.

RECOMMENDATION

The Vice President – Economic Development recommends that the Trustees:

- 2) approve an extension, from June 1, 2018 to May 31, 2019, of the Economic Development Plan ('Plan') covering the use of net revenues produced by the sale of Expansion Power to provide electric bill discounts in the form of an Industrial Incentive Awards ('IIAs') to manufacturing companies located in New York State that are at risk of closure or relocation to another state;
- 3) authorize submission to Economic Development Power Allocation Board ('EDPAB') of a request to approve an extension, from June 1, 2018 to May 31, 2019, of the Plan; and
- 4) approve a one-year extension, from June 1, 2018 to May 31, 2019, of the term of the IIA previously awarded to Pratt Paper (NY), Inc. in the amount of up to \$1 million in connection with its Staten Island operations, contingent upon EDPAB's extension of the Plan as described above.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Authority hereby approves an extension to the Economic Development Plan ("Plan") covering the use of net revenues produced by the sale of Expansion Power to provide electric bill discounts to manufacturers in the form of an Industrial Incentive Award ("IIA") to May 31, 2019, as described in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Authority is authorized to submit the Plan as modified to the Economic Development Power Allocation Board ("EDPAB") to request its approval; and be it further

RESOLVED, That the Authority hereby approves an extension to the term of the IIA previously awarded to Pratt Paper (NY), Inc. to May 31, 2019, as described in the foregoing report of the President and Chief Executive Officer, contingent upon EDPAB's approval of the requested extension of the Plan; and be it further

RESOLVED, That the Chairman, the Vice Chair, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all

October 2, 2018

agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

d. Procurement (Services) Contracts:

**i. Procurement (Services) and Other Contracts –
Business Units and Facilities –
Awards, Extensions and/or Additional Funding**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve the award and funding of the multiyear procurement (services) contracts listed in Exhibit '4d i-A,' as well as the continuation and/or funding of the procurement (services) and other contracts listed in Exhibit '4d i-B,' in support of projects and programs for the Authority's Business Units/Departments and Facilities. Detailed explanations of the recommended awards and extensions, including the nature of such services, the bases for the new awards if other than to the lowest-priced, lowest total cost of ownership or 'best valued' bidders and the intended duration of such contracts, or the reasons for extension and the projected expiration dates, are set forth in the discussion below.

BACKGROUND

Section 2879 of the Public Authorities Law and the Authority's Guidelines for Procurement Contracts require the Trustees' approval for procurement contracts involving services to be rendered for a period in excess of one year.

The Authority's current Expenditure Authorization Procedures ('EAPs') require the Trustees' approval for the award of non-personal services, construction, equipment purchase or non-procurement contracts in excess of \$6 million, as well as personal services contracts in excess of \$2 million if low bidder or best value, or \$1 million if sole-source, single-source or other non-competitive award.

The Authority's current EAPs also require the Trustees' approval when the cumulative change order value of a personal services contract exceeds \$500,000, or when the cumulative change order value of a non-personal services, construction, equipment purchase, or non-procurement contract exceeds the greater of \$6 million or 25% of the originally approved contract amount not to exceed \$6 million.

DISCUSSION

Awards

The Trustees are requested to approve the award and funding of the multiyear procurement (services) contracts listed in Exhibit '4d i-A,' where the EAPs require approval based upon contract value or the terms of the contracts will be more than one year. Except as noted, all of these contracts contain provisions allowing the Authority to terminate the services at the Authority's convenience, without liability other than paying for acceptable services rendered to the effective date of termination. Approval is also requested for funding all contracts, which range in estimated dollar value from approximately \$30,000 to \$7 million. Except as noted, these contract awards do not obligate the Authority to a specific level of personnel resources or expenditures.

The issuance of multiyear contracts is recommended from both cost and efficiency standpoints. In many cases, reduced prices can be negotiated for these long-term contracts. Since these services are typically required on a continuous basis, it is more efficient to award long-term contracts than to rebid these services annually.

Extensions

Although the firms identified in Exhibit '4d i-B' have provided effective services, the issues or projects requiring these services have not been resolved or completed and the need exists for continuing these contracts. The Trustees' approval is required because the terms of these contracts will exceed one year including the extension, the term of extension of these contracts will exceed one year and/or because the cumulative change-order limits will exceed the levels authorized by the EAPs in forthcoming change orders. The subject contracts contain provisions allowing the Authority to terminate the services at the Authority's convenience, without liability other than paying for acceptable services rendered to the effective date of termination. These contract extensions do not obligate the Authority to a specific level of personnel resources or expenditures.

Extension of the contracts identified in Exhibit '4d i-B' is requested for one or more of the following reasons: (1) additional time is required to complete the current contractual work scope or additional services related to the original work scope; (2) to accommodate an Authority or external regulatory agency schedule change that has delayed, reprioritized or otherwise suspended required services; (3) the original consultant is uniquely qualified to perform services and/or continue its presence and rebidding would not be practical or (4) the contractor provides proprietary technology or specialized equipment, at reasonable negotiated rates, that the Authority needs to continue until a permanent system is put in place.

The following is a detailed summary of each recommended contract award and extension.

Contract Awards in Support of Business Units/Departments and Facilities:

Commercial Operations – Energy Efficiency

Due to the need to commence services, the personal services contracts with **Airtek Environmental Corp. ('Airtek') (Contract 4600003513)**, **Adelaide Environmental Health Associates, Inc. ('Adelaide') (Contract 4600003518)**, **CHA Consulting, Inc. ('CHA') (Contract 4600003514)**, **KAM Consultants Corp. ('KAM') (Contract 4600003517)**, **LiRo Engineers, Inc. ('LiRo') (Contract 4600003515)**, **Louis Berger & Associates, PC ('LB&A') (Contract 4600003511)**, **Lu Engineers, ('Lu') (Contract 4600003512)** and **TRC Engineers, Inc. ('TRC') (Contract 4600003516)** became effective August 29, 2018, for the initial interim award amount of \$800,000 (\$100,000 per contract), subject to the Trustee's approval as soon as practicable, in accordance with the Authority's Guidelines for Procurement Contracts and EAPs. These contracts would provide asbestos and lead management services in support of the Authority's Energy Efficiency Program ('EEP') statewide. The EEP provides energy efficiency and renewable energy services to customers meeting the eligibility criteria under Public Authorities Law. Services include audits, design, engineering, procurement and installation services related to a wide variety of energy technologies and renewables. The installation services are performed at customers' facilities statewide which may contain asbestos and/or lead and, therefore, are subject to environmental regulations for testing and removal of regulated substances. Bid documents (**Q18-6437JGM**) were developed by staff and were accessible through the NYPA.gov site. The Request for Quotations was advertised on the New York State *Contract Reporter* website and posted on the Procurement page of the Authority's website. Twenty-three firms / entities were listed as having been invited to, or requested to participate in, the Ariba event. Eleven proposals were received electronically via Ariba and were evaluated, as further set forth in the Award Recommendation documents. Staff recommends the award of value contracts to Airtek, Adelaide, CHA, KAM, LiRo, LB&A, Lu and TRC which were technically and commercially qualified and meet the bid requirements on the basis of 'best value,' which optimizes quality, cost and efficiency among responsive and responsible offerors. The contracts are for an intended term of five years, subject to the Trustees' approval, which is hereby requested. Approval is also requested for the amount expected to be expended for the term of the contracts, \$7 million. Adelaide is a NYS-certified Women-owned Business Enterprise and Lu is a NYS-certified Minority-owned Business Enterprise.

Due to the need to commence services, the personal services contracts with **Arcadis of New York ('Arcadis') (Contract 4600003499)**, **Burns & McDonnell Consultants, PC ('Burns') (Contract 4600003509)**, **Toll International, LLC ('Toll') (Contract 4600003507)** and **Turner and Townsend, Inc. ('Turner') (Contract 4600003500)** became effective August 27, 2018, for the initial interim award amount of \$800,000 (\$200,000 per contract), subject to the Trustee's approval as soon as practicable, in accordance with the Authority's Guidelines for Procurement Contracts and EAPs. These contracts would provide on-call Oracle Primavera consulting services in support of the Authority's Energy Efficiency Program ('EEP'). The EEP provides energy efficiency and renewable energy services to customers meeting the eligibility criteria under Public Authorities Law. Services include audits, design, engineering, procurement and installation services related to a wide variety of energy technologies and renewables. Energy services delivery has been supported by the use of the Primavera Enterprise Project Portfolio Management ('EPPM') platform and this will be used to a greater extent as part of NYPA's Digital Utility vision. In order to meet the anticipated increase in energy services projects and deliver best in class service to customers, additional support is required to expand the capabilities of the Primavera system. To that end, bid documents (**Q18-6431JR**) were developed by staff and were accessible through the NYPA.gov site. The Request for Quotations was advertised on the New York State *Contract Reporter* website and posted on the Procurement page of the Authority's website. Eight firms / entities were listed as having been invited to, or requested to participate in, the Ariba event. Twelve proposals were received electronically via Ariba and were evaluated, as further set forth in the Award Recommendation documents. Staff recommends the award of value contracts to Arcadis, Burns, Toll and Turner which were technically and commercially qualified and meet the bid requirements on the basis of 'best value,' which optimizes quality, cost and efficiency among responsive and responsible offerors. The contracts are for an intended term of five years, subject to the Trustees' approval, which is hereby requested. Approval is also requested for the amount expected to be expended for the term of the contracts, \$3 million. Toll is a NYS-certified Minority-owned Business Enterprise.

Utility Operations – Asset & Maintenance Management

The proposed personal services contract with **USIC Locating Services, LLC ('USIC') (Q18-6414JGM)** would provide underground locational response services under the federal and state 'Call before you Dig (811)' program. In accordance with 16 NYCRR Part 753, NYPA is required to belong to a one-call service. NYPA retains membership in both the upstate (Dig Safely NY) and downstate (NYCLI, or New York 811) call centers. In 2012, NYPA entered into agreement to automate the response requirements under this code, to utilize a contracted third-party agent in satisfying underground digging requests in the proximity to buried NYPA-owned services. These services include, but are not limited to normal timeframe responses, emergency timeframe responses and mapping/identification services in both the upstate and NYCLI regions. Bid documents were developed by staff and were accessible through the NYPA.gov site. The Request for Quotations was advertised on the New York State *Contract Reporter* website and posted on the Procurement page of the Authority's website. Ten firms / entities were listed as having been invited to, or requested to participate in, the Ariba event. Two proposals were received electronically via Ariba and were evaluated, as further set forth in the Award Recommendation documents. Staff recommends the award of a contract to USIC which is technically and commercially qualified and meets the bid requirements as the lowest-priced bidder among responsive and responsible offerors. The contract is for an intended term of five years, subject to the Trustees' approval, which is hereby requested. Approval is also requested for the amount expected to be expended for the term of the contract, \$694,000.

Utility Operations – Environmental Health & Safety

The proposed non-personal services contract with **Monroe Extinguisher Company, Inc. ('Monroe') (N18-20128733GJ)** would provide portable fire extinguisher inspection services. These services include, but are not limited to, the provision of all supervision, labor, equipment and materials needed to provide annual on-site inspection services at NYPA's Niagara Power Project to comply with National Fire Protection Association-10 ('NFPA-10') requirements for portable and wheeled fire extinguishers. Bid documents were developed by staff and were accessible through the NYPA.gov site.

The Request for Quotations was advertised on the New York State *Contract Reporter* website and posted on the Procurement page of the Authority's website. Seven firms / entities were listed as having been invited to, or requested to participate in, the Ariba event. Four proposals were received electronically via Ariba and were evaluated, as further set forth in the Award Recommendation documents. Staff recommends the award of a contract to Monroe which is technically and commercially qualified and meets the bid requirements as the lowest-priced bidder among responsive and responsible offerors. The contract is for an intended term of four years, subject to the Trustees' approval, which is hereby requested. Approval is also requested for the not-to-exceed amount of \$30,000.

Extensions and/or Additional Funding Requests:

Corporate Communications

Subsequent to Trustee approval, on December 22, 2016 the New York Power Authority (NYPA) issued a two-year, personal services contract to **Essense Partners, Inc. ('Essense') (Contract 4600003260)** in the amount of \$1 million to provide consulting services with respect to change management and strategic communications, in order to educate and inform employees concerning the impact of internal and external changes affecting the Authority and the energy industry. This extension is requested so that Essense may provide these services as a continuation of their communications support for NYPA's 2020 Vision. Staff requests the Trustees' approval to extend the contract for a period of three years, through December 21, 2021. Staff also requests additional funding in the amount of \$3 million of which \$500,000 has been released on an interim basis pending approval by the Trustees. Essense is a NYS-certified Minority-owned Business Enterprise and a NYS-certified Women-owned Business Enterprise.

Law

The **Fox Rothschild, LLP ('Fox') (PO# 4500276754)** law firm provides legal representation to the Authority in connection with litigation and arbitration proceedings regarding six separate construction projects undertaken by the Authority on behalf of energy services customers. Two of the matters have been concluded and in the remaining four matters the Authority is either the plaintiff or defendant with counterclaims against the plaintiff(s). In total, the Authority is seeking damages or defending claims that aggregate to approximately \$27 million. In all the matters, there has been substantial document discovery and use of construction expert witnesses. The contract was effective as of August 29, 2016 for a term of one year with an approved amount of \$350,000. An additional \$500,000 and contract extension for three years (through August 28, 2020) was approved at the September 26, 2017 Trustees' meeting. An additional \$2 million was approved at the March 20, 2018 Trustees' meeting. The associated construction projects are ongoing. The Trustees are requested to approve additional funding in the amount of \$2,250,000, for a total contract value of \$5.1 million.

Utility Operations – St. Lawrence

On June 21, 2017, the New York Power Authority ('NYPA') issued a construction contract to **RSI Roofing, Inc. ('RSI') (PO# 4500286671)** in the amount of \$536,875 to replace the roofs on the Observation Deck, L-Block Elevator Penthouse and the Fifth Floor. Certain additional repair and construction work was added to the project late in the life of the contract, raising the cost to \$686,455.37 and providing little time to complete the work approved by NYPA. Staff requests the Trustees' approval for the extension of the RSI contract for up to six months, through December 20, 2018, with the period from June 21, 2018 through October 2, 2018 approved on an interim basis. No additional funding is required or requested.

FISCAL INFORMATION

Funds required to support contract services for various Business Units/Departments and Facilities have been included in the 2018 Approved Operating or Capital Budget. Funds for subsequent years,

where applicable, will be included in the budget submittals for those years. Payment will be made from the Operating or Capital Fund, as applicable.

Funds required to support contract services for capital projects have been included as part of the approved capital expenditures for those projects and will be disbursed from the Capital Fund in accordance with the project's Capital Expenditure Authorization Request, as applicable.

RECOMMENDATION

The Senior Vice President – Operations Support Services and Chief Engineer; the Senior Vice President – Power Supply; the Senior Vice President – Technology and Innovation; the Senior Vice President – Human Resources & Enterprise Shared Services; the Vice President – Environmental, Health and Safety; the Vice President – Strategic Operations; the Vice President Digital Transformation / Chief of Staff; the Acting Vice President Energy Efficiency; the Regional Manager Northern NY; the Regional Manager Western NY; the Assistant General Counsel; the GM Superintendent / Licensing Manager; the Director Asset & Maintenance Management, the Program Manager Energy Efficiency; the Asset Strategy Manager and Safety, Health & Fire Protection Administrator recommend that the Trustees approve the award of multiyear procurement (services) and other contracts to the companies listed in Exhibit '4d i-A' and the extension and/or funding of the procurement (services) contracts listed in Exhibit '4d i-B,' for the purposes and in the amounts discussed within the report and/or listed in the respective exhibits.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.”

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority, the award and funding of the multiyear procurement services contracts set forth in Exhibit “4d i-A,” attached hereto, are hereby approved for the period of time indicated, in the amounts and for the purposes listed therein, as recommended in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority, the contracts listed in Exhibit “4d i-B,” attached hereto, are hereby approved and extended for the period of time indicated, in the amounts and for the purposes listed therein, as recommended in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

ii. **Procurement (Services) Contracts –
Digital Utility Strategic Partnership –
Data Analytics – Contract Award**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve the award of four-year contracts for the Digital Utility Strategic Partnership focusing on data analytics capabilities to the following ten most technically qualified firms:

1. ChaiOne Inc. of Houston, TX ('ChaiOne')
2. Digital Engineering Ltd of Ontario, Canada ('Digital Engineering')
3. ElectriComm, Inc. of Marcellus, NY ('ElectriComm')
4. Electric Power Group, LLC of Pasadena, CA ('EPG')
5. j5 North America Inc. of Woodland, TX ('j5')
6. mPrest Systems Ltd. of Petach, Tikva, Israel ('mPrest')
7. Trove Predictive Data Science LLC of Buffalo, NY ('Trove')
8. Uptake Technologies of Chicago, IL ('Uptake')
9. Utegration LLC of Houston, TX ('Utegration')
10. Vrinda Inc. of New York, NY ('Vrinda')

In September 2017, the Trustees approved five-year contracts for the Digital Utility Strategic Partnership with expertise in the focus areas of: Management Consulting, Technology Implementation, and iSOC and NYEM Support/Training in the aggregate not-to-exceed amount of \$50 million. These requested contracts will build on, and further enhance the capabilities of the existing Digital Utility Strategic Partnership contracts. No additional funding is requested at this time.

BACKGROUND

Section 2879 of the Public Authorities Law and the Authority's Guidelines for Procurement Contracts require the Trustees' approval for procurement contracts involving services to be rendered for a period in excess of one year. The Authority's Expenditure Authorization Procedures ('EAPs') require the Trustees' approval for the award of personal services contracts for a period in excess of one year.

The Authority's 2020 Strategic Plan aims to position the Authority as an integral and valuable part of the future electric system and will support its customers through the following five aims:

- Developing an enterprise-wide digitized utility in the United States.
- The market leader for both energy efficiency and grid scale / behind the meter renewable energy services.
- Offering the best deal in electric supply and electricity commodity management for the Authority's supply customers.
- Having the most impactful transmission and large-scale renewable projects either deployed or in active development.
- Striving to be the most innovative and active service provider in the fields of energy storage and electric vehicle infrastructure.

Successful execution of the first of these aims is critical in order for the Authority to achieve the others. To support implementation of the above aims, and as market conditions continue to change, the Authority has sought to build on the Digital Utility Strategic Partnerships with a focus on Data Analytics for a four-year term.

DISCUSSION

In June 2018, the Authority issued a request for proposal ('RFP') for Digital Utility Strategic Partnership – Data Analytics and received forty-seven bids on July 19, 2018. The number of firms selected was due to their expertise in the areas discussed below:

1. Data Analytics, Artificial Intelligence, Industrial IoT and Cloud Based Services:
Data Analytics and IoT solution offerings include flexible, end-to-end services that are designed to help drive positive results with seamless integration of analytics, situational awareness and control while delivering value in all four core elements of a solution lifecycle: define, implement, realize and grow.
2. Synchrophasor Applications:
Synchrophasor solution offerings include developing applications such as wide area protection, monitoring and control, system reliability and transient stability to be tested in AGILE environment and, ultimately, be implemented on the Authority's PMU network.
3. Robotic Process Automation ('RPA'):
RPA solution offerings include a survey across the Authority's business units to determine which RPA tool(s) (on premise solution or SaaS) and/or service should be selected and implemented.
4. Digital Logbook and Shift Turnovers
These technologies can enable better decision-making in the plant, field and office environments by digitalizing existing processes and workflows.
5. Augmented Reality, Virtual Reality, Mobile App Creation and Support
These technologies could add value by improving productivity, increasing safety, optimizing logistics, increasing the effectiveness of training and maintenance and allowing workers to interact with assets all the way to the back office.

A bid review and analysis was performed based on the following, but not limited to, vendor qualifications, experience, and alignment with the Authority's vision, proposed execution approach, and experience with existing and future Authority platforms to identify the most qualified vendors to support the above focus areas. The ten firms selected will be awarded Value Contracts and added to the pool of Digital Utility Strategic Partnership contracts for a four-year term, expiring in 2022, to coincide with the original term. Individual tasks will be assigned by issuance of a Purchase Order Release ('POR') against the established value contracts. Since market conditions continue to change, the Authority may evaluate the need to pre-qualify additional firms on an annual basis.

FISCAL INFORMATION

Payment associated with this project will align with the previous Digital Utility Strategic Partnerships contracts and will be made from the Authority's Capital Fund or Operations Fund, as appropriate.

RECOMMENDATION

The Senior Vice President – Technology & Innovation, the Vice President – Strategic Operations, and the Vice President – Procurement recommend that the Trustees approve the award of four-year contracts for the Digital Utility Strategic Partnership focusing on Data Analytics capabilities.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority and the Authority's Expenditure Authorization Procedures, approval is hereby granted to award four-year Contracts to the firms listed below, building on the capabilities of the existing Digital Utility Strategic Partnership utilizing the existing aggregate total of \$50 million as recommended in the foregoing report of the President and Chief Executive Officer;

<u>Contractor</u>	<u>Location</u>	Utilize the Existing <u>\$50 million</u> aggregate
ChaiOne Inc.	Houston, TX	
Digital Engineering Ltd.	Ontario, Canada	
ElectriComm, Inc.	Marcellus, NY	
Electric Power Group, LLC	Pasadena, CA	
j5 North America Inc.	Woodland, TX	
mPrest Systems Ltd.	Petach, Tikva, Israel	
Trove Predictive Date Science LLC	Buffalo, NY	
Uptake Technologies	Chicago, IL	
Utegration LLC	Houston, TX	
Vrinda Inc.	New York, NY	

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things and take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

e. Finance:

**i. Release of Funds in Support of the
New York State Canal Corporation**

The President and Chief Executive Officer submitted the following report:

"SUMMARY"

The Trustees are requested to authorize the release of an additional up to \$27 million in funding to the New York State Canal Corporation ('Canal Corporation') to support the operations of the Canal Corporation in calendar year 2018. The amount requested is 28% of the Canal Corporation's revised 2018 O&M Budget. The amount requested is in addition to the \$68 million that the Trustees authorized, through August 2018, to be released to support the operations of the Canal Corporation in calendar year 2018.

BACKGROUND

The Authority has been authorized to provide financial support for the Canal Corporation. See, e.g., Public Authorities Law § 1005-b(2). However, certain expenditures associated therewith do not constitute Capital Costs or Operating Expenses ('Operating Expenses') as defined in the Authority's General Resolution Authorizing Revenue Obligations dated February 24, 1998, as amended and supplemented ('Bond Resolution'). Expenditures for the Canal Corporation's operating purposes that do not constitute Capital Costs or Operating Expenses must satisfy the requirements of the Authority's Bond Resolution relating to the release of funds from the trust estate created by the Bond Resolution for lawful corporate purposes. In addition, as set forth in the Trustees' Policy Statement dated May 24, 2011, a debt service coverage ratio of 2.0 is to be used as a reference point in considering any such release of funds.

The Bond Resolution permits the Authority to withdraw monies 'free and clear of the lien and pledge created by the [Bond] Resolution' provided that (a) such withdrawals must be for a 'lawful corporate purpose as determined by the Authority,' and (b) the Authority must determine, taking into account among other considerations anticipated future receipt of revenues or other moneys constituting part of the Trust Estate, that the funds to be so withdrawn are not needed for (i) payment of reasonable and necessary operating expenses, (ii) an Operating Fund reserve for working capital, emergency repairs or replacements, major renewals or for retirement from service, decommissioning or disposal of facilities, (iii) payment of, or accumulation of a reserve for payment of, interest and principal on senior debt or (iv) payment of interest and principal on subordinate debt.

Under the Bond Resolution, Capital Costs (which includes capital costs related to the Canal Corporation) may be paid without satisfying the provision described above.

DISCUSSION

With this authorization, the Trustees will approve the release of \$27 million, an amount equal to 28% of the Canal Corporation's revised 2018 O&M Budget. The amount requested is in addition to the \$68 million that the Trustees authorized through August 2018 to be released to support the operations of the Canal Corporation in calendar year 2018. With regard to Canal Corporation's operating expenses in excess of \$95 million in calendar year 2018, staff is not requesting any action at this time, but will return to the Board to request additional releases, as needed.

Staff has reviewed the effect of releasing up to an additional \$27 million in funding at this time on the Authority's expected financial position and reserve requirements. In accordance with the Board's Policy Statement adopted May 24, 2011, staff calculated the impact of this release, together with the last 12 months releases including (i) the release of \$41 million in Canal related operating expenses for 2017

previously authorized at the July 2017 meeting, (ii) the release of \$30 million in Recharge New York Discounts for 2018, (iii) the release of \$68 million in Canal related operating expenses for 2018 previously authorized at the December 2017, March 2018, and August 2018 meetings, (iv) the release of up to \$1 million in Western NY Power Proceeds net earnings, and (v) the release of up to \$2 million in Northern NY Power proceeds net earnings on the Authority's debt service coverage ratio and determined it would not currently fall below the 2.0 reference point level. The debt service coverage ratio as calculated per the Board Policy Statement is expected to be at or above the 2.0 reference point for fiscal year 2018. Given the current financial condition of the Authority, its estimated future revenues, operating expenses, debt service and reserve requirements, staff is of the view that it will be feasible for the Authority to release such amounts from the trust estate created by the Bond Resolution consistent with the terms thereof.

FISCAL INFORMATION

Staff has determined that sufficient funds are available in the Operating Fund to release an additional up to \$27 million in funding to support the operation of the Canal Corporation in calendar year 2018. Staff has further determined that such Authority funds are not needed for any of the purposes specified in Section 503(1)(a)-(c) of the Authority's Bond Resolution.

The expenses associated with the operations of the Canal Corporation for calendar year 2018 are included in the Canal Corporation's revised 2018 O&M Budget.

RECOMMENDATION

The Chief Financial Officer recommends that the Trustees authorize the release of an additional up to \$27 million in funding to the Canal Corporation to support the operations of the Canal Corporation in calendar year 2018. The Chief Financial Officer further recommends that the Trustees affirm that such releases are feasible and advisable, that such funds are not needed for any of the purposes specified in Section 503(1)(a)-(c) of the Authority's Bond Resolution and that the release of such funds is authorized.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Trustees hereby authorize the release of an additional up to \$27 million in funding to the Canal Corporation to support operations of the Canal Corporation in calendar year 2018, as discussed in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the amount of up to \$27 million in funding as described in the foregoing report is not needed for any of the purposes specified in Section 503(1)(a)-(c) of the Authority's General Resolution Authorizing Revenue Obligations, as amended and supplemented, and that the release of such amount is feasible and advisable; and be it further

RESOLVED, That as a condition to making the payments specified in the foregoing report, on the day of such payments, the Treasurer or the Deputy Treasurer shall certify that such monies are not then needed for any of the

purposes specified in Section 503(1)(a)-(c) of the Authority's General Resolution Authorizing Revenue Obligations, as amended and supplemented; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer, the Executive Vice President and General Counsel, the Executive Vice President and Chief Financial Officer, the Corporate Secretary, the Treasurer and all other officers of the Authority be, and each of them hereby is, authorized and directed, for and in the name and on behalf of the Authority, to do any and all things and take any and all actions and execute and deliver any and all certificates, agreements and other documents that they, or any of them, may deem necessary or advisable to effectuate the foregoing resolution, subject to approval as to the form thereof by the Executive Vice President and General Counsel.

ii. **North Country Energy Storage Project –
Funding Approval for Preliminary Development**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve funding in the amount of \$6.0 million to support preliminary development costs for the North Country Energy Storage Project ('Project'). This Project will establish a 20 MW battery facility at an Authority-owned substation in Northern New York. The energy storage system will supply the New York wholesale energy and ancillary service markets and will contribute to the adequacy, economy and reliability of the supply of electric power in New York. Through this project, the Authority will demonstrate the operation of a large-scale energy storage system in support of the State's renewable energy and energy storage mandates.

BACKGROUND

In accordance with the Authority's Capital Planning and Budgeting Procedures, capital expenditures in excess of \$6 million require the Trustees' approval.

DISCUSSION

In 2016, Governor Cuomo established the Clean Energy Standard which requires 50% of the State's electricity supply to come from renewables by 2030. To support New York's transition to clean power, the Governor adopted a proactive mandate to build 1500 MW of energy storage in the State by 2025. The North Country Energy Storage project supports both of these goals as it establishes a large-scale energy storage project in a renewable energy rich area of the State.

The Project also supports the Authority's authorization to contribute to the adequacy, economy and reliability of the State's electric power supply. Approximately 80% of the electricity supply in Northern New York is from renewable resources, which includes the Authority's St. Lawrence Power Project and more than 650 MW of wind generation. Canadian hydropower energy imports are injected into the State in this region, and a significant amount of additional wind and solar power development is expected in the area. Frequently, transmission to deliver this renewable power to downstate load centers is constrained, leaving these renewable energy resources bottled in the North. During periods of transmission constraints, the renewable energy generated can be higher than the local electricity demand, which, in turn, can require generators, including the wind and hydro resources, to pay into the wholesale market for the energy they generate (called negative energy pricing) or not generate. The North Country Energy Storage Project will absorb some of this excess renewable generation, which positions the Authority to both facilitate renewable generation and take advantage of energy pricing arbitrage opportunities. The North Country Energy Storage Project will also participate in providing frequency regulation, which will support the reliability of electric supply and provide the Project additional revenue.

The Project will be a first of its kind for the Authority. Developing, operating and optimizing a lithium-ion battery system of this size will equip the Authority with invaluable experience and expertise in a fast-growing market. The Authority also plans to use this demonstration project as an opportunity to help other stakeholders advance the State's clean energy mandates. For instance, the Authority and the New York Independent System Operator ('NYISO') plan to work collaboratively to ensure this Project, and future projects, are incorporated and optimized effectively in the NYISO's wholesale markets. Experience gained from this Project will not only advance energy storage development efforts at the Authority, it will position the Authority to lead storage adoption across the State.

Preliminary development work including conceptual engineering, real estate acquisition, and administration of competitive procurements, is required to complete a firm cost estimate and schedule for

the Project. Following the completion of this work and the Trustees' ultimate approval, the Authority will be positioned to successfully deliver the project for the benefit of the New York State electric system.

FISCAL INFORMATION

The requested \$6.0 million is allocated in the approved 2018 budget and the draft 2019 budget. The total Project is estimated to be \$30 million. NYPA will request the Trustees' approval of funds for development of the full project once the preliminary development work is complete.

RECOMMENDATION

The Vice President – Project and Business Development recommends that the Trustees approve funds in the amount of \$6.0 million be committed to advance preliminary development work for the North Country Energy Storage Project.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.”

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Authority's Capital Planning and Budgeting Procedures, approval is hereby granted for the funding to support preliminary development of the North Country Energy Storage Project in the amount of \$6.0 million, as recommended in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

iii. **Approval of the Budget Report for Submission
Pursuant to Section 2801 of the Public
Authorities Law and Agency Procedures**

The President and Chief Executive Officer submitted the following report:

"SUMMARY"

The Trustees are requested to (a) approve the budget report attached as Exhibit '4e iii-A' (the 'Budget Report'), and (b) authorize Authority staff to submit the Budget Report to the State officials identified in Public Authorities Law ('PAL') §2801, and file the Budget Report electronically with the State in accordance with New York State Authorities Budget Office ('ABO') and State Comptroller requirements.

BACKGROUND

PAL §2801 requires each state public authority to submit a Budget Report annually, not less than 90 days before the commencement of its fiscal year, in the form submitted to its members or trustees, with budget information on operations and capital construction setting forth the estimated receipts and expenditures for the next fiscal year and the current fiscal year, and the actual receipts and expenditures for the last completed fiscal year, to the Governor, the Chair and Ranking Minority Member of the Senate Finance Committee, the Chair and Ranking Minority Member of the Assembly Ways and Means Committee and the ABO (collectively, 'State Officials').

The ABO and State Comptroller also require state public authorities to file budget reports electronically with the State through the Public Authorities Reporting Information System ('PARIS') online reporting system. PARIS requires three additional years of forward looking budget information for a total of six years of budget information.

DISCUSSION

The Trustees are requested to approve the Budget Report prepared by staff. The Budget Report reflects information required by PAL § 2801 and additional information required by the PARIS system. The Budget Report is inclusive of budget information relating to the Canal Corporation. The Trustees are further requested to authorize staff to submit the Budget Report to the State Officials identified in PAL §2801, and to file the Budget Report with the State electronically through PARIS.

The Budget Report is prepared solely for the purpose of meeting the requirements of PAL §2801 and Comptroller and ABO requirements. The Budget Report relies on data and projections that were developed during the months of July through September 2018. These data and projections include inputs such as forecasts of electric prices, fuel expenses, customer power and energy use, generation levels and revenues from Authority power projects, operations & maintenance and capital expense. The Authority is not required to update the Budget Report at any point during the remainder of 2018 or in 2019 prior to submittal of the Budget Report for fiscal year 2019.

Staff is in the process of preparing the Authority's annual budget as well as the Four-Year Budget and Financial Plan. The annual budget and the Four-Year Budget and Financial Plan will be presented to the Trustees for approval at a subsequent meeting. The Four-Year Budget and Financial Plan may include assumptions and figures that are different from those in the Budget Report.

FISCAL INFORMATION

The Budget Report's estimates for each of the years 2018-2022 are indicative forecasts. The Trustees are not being asked to approve any revenue or expenditure amounts for those years at this time.

RECOMMENDATION

The Senior Vice President - Financial Operations and Acting Controller recommends that the Trustees: (1) approve the Budget Report; and (2) authorize staff to submit the Budget Report to State Officials and file the Budget Report with the State electronically through PARIS, as discussed herein.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to Public Authorities Law §2801, the Budget Report attached as Exhibit "4e iii-A" is approved for the purposes stated in the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, the Authority's staff be, and hereby is, authorized to submit the Budget Report to the State officials identified in Public Authorities Law §2801, and file the Budget Report with the State electronically in accordance with New York State Authorities Budget Office and State Comptroller requirements; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

f. Real Estate

**i. Amendment of Office Space Lease -
30 South Pearl Street, Albany, New York**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to authorize amendment of the Authority's lease with PS Associates, L.P., ('Landlord') to add approximately 5,032 square-feet of space on the sixth floor at 30 South Pearl Street, Albany, New York ('30 South Pearl Street') and to extend the lease from its current termination date of July 31, 2020 to July 31, 2023.

BACKGROUND

The Authority's Expenditure Authorization Procedures governing real estate require the Trustees' approval for the acquisition of lease interests, including any extensions, where the additional annual rent exceeds \$100,000.00.

The Authority has leased office space on the 10th floor at 30 South Pearl Street since March 1, 1999. The original lease has been amended on several occasions to extend the term and to adjust the leased square footage to meet staffing needs.

DISCUSSION

Currently, the Authority leases the entire tenth floor of the 30 South Pearl Street Building. However, as a result of recent staff additions, the tenth floor space is at capacity. Additional space is required to support the hiring of a minimum of 13 new employees to be located at 30 South Pearl Street.

Approximately 5,032 square-feet of additional space is currently available on the 6th floor and would accommodate the new staff and allow flexibility in the event of future expansion and reorganization. The Landlord has proposed that if the Authority leases the additional space on the 6th floor and extends its current lease on the 10th floor (currently due to expire in July, 2020) through July 2023, the Landlord will provide the basic build-out, including painting, carpeting and requested renovation, at no additional cost to the Authority. The Authority will incur some cost for furnishings, IT and security, as well as standard *pro rata* tax and operation and maintenance costs. The Authority will incur no brokerage fees in this transaction.

In conjunction with the foregoing, the Landlord will perform minor modifications to the 10th floor to create additional work spaces, also at no additional cost to the Authority.

The Landlord has proposed that the rent for the entirety of the space, subject to negotiation of final lease terms, will be \$20 per square-foot ('psf') from the date of substantial completion of the tenant improvements through July 31, 2020 (matching the rate in the current lease), increasing to \$21.75 psf for the extended term. Utilities are the Authority's responsibility. Authority staff has reviewed local market conditions and has determined that the terms are competitive and reasonable.

FISCAL INFORMATION

Funds required for rent will come from the Authority's Operating Fund.

RECOMMENDATION

The Vice President – Enterprise Shared Services recommends that the Trustees approve the amendment of the Authority's lease with PS Associates, L.P., to add space on the 6th Floor and to extend the lease from its current termination date of July 31, 2020 to July 31, 2023 at 30 South Pearl Street, Albany, New York.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the President and Chief Executive Officer and the Vice President – Enterprise Shared Services be, and hereby are, authorized to amend its lease with PS Associates, L.P. to extend the term and to add approximately 5,032 square-feet of space located on the sixth floor at 30 South Pearl Street, Albany, New York on substantially the terms set forth herein, subject to approval of lease documents by the Executive President and General Counsel or his designee; and be it further

RESOLVED, That the Vice President – Enterprise Shared Services, or designee, is hereby authorized to execute any and all other agreements, papers or instruments on behalf of the Authority that may be deemed necessary or desirable to carry out the foregoing, subject to the approval by the Executive Vice President and General Counsel; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things and take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

g. Naming of the 500-MW Combined Cycle Plant in Honor of Eugene W. Zeltmann

The President and Chief Executive Officer submitted the following report:

"SUMMARY"

The Trustees are requested to approve the recommendation to name the Power Authority's 500-Megawatt Combined-Cycle Plant in Astoria, Queens, the Eugene W. Zeltmann Power Project, after the former NYPA President and Chief Executive Officer, who led the Power Authority from September 1997 to January 2006 and who was an exemplar of outstanding public service.

BACKGROUND

NYPA placed the 500-MW plant, at 31-03 20th Avenue, Queens, into commercial operation on December 31, 2005. At the time of its construction, the \$650 million facility, which overlooks the East River, was the first new, large power plant built in New York City in decades.

The combined-cycle plant, which is fueled by natural gas, is one of the cleanest, most efficient generating facilities in the city, with state-of-the-art emissions controls, two combustion-turbine generators, and two heat-recovery steam generators, which harness hot exhaust normally lost in the production of electricity to spin an additional turbine generator.

The energizing of the plant, which serves NYPA's New York City governmental customers and their thousands of essential public facilities and services, made possible the curtailing of power production at a 1970s-era NYPA power plant at the same 47-acre Astoria site and to that plant's cessation of operations in January 2010. Those actions were provided for under a 2002 agreement with the New York State Department of Environmental Conservation, City of New York, Borough of Queens and environmental groups for reducing carbon emissions and improving air quality in the city.

Eugene W. Zeltmann, who passed away in February 2018, championed the new plant through the course of its development, including its permitting, design, procurement and three-year construction. His hands-on leadership style, amid various challenges and hurdles that are common with large infrastructure projects, was instrumental in NYPA's managing the plant's construction costs and completing the facility on schedule.

In the more than 12 years since the plant was placed in operation, it has proven to be a stalwart for clean, economical and reliable electricity in New York City. These contributions were further bolstered by NYPA's investing more than \$50 million over five years in energy efficiency and clean energy projects in Queens and the other city boroughs, under the 2002 agreement.

Mr. Zeltmann's impressive credentials in science and notable career experiences in the energy industry and regulatory matters before joining NYPA contributed to his successful leadership at the Power Authority. Those strong qualifications included his holding a Doctorate in Physical Chemistry from John Hopkins University, serving as Deputy Chairman of the New York State Public Service Commission and in senior management roles at General Electric Company, where he worked for more than 25 years. This distinguished background was invaluable to the effective guidance he provided to NYPA's staff on countless initiatives and matched by his scrupulous professional integrity, collegiality and consideration for others.

The 500-MW plant is one of a number of major NYPA achievements under Mr. Zeltmann's stewardship. Others include:

- NYPA helping to facilitate the transition to a new era in the electric power industry in New York State, as a participant in the then-newly established competitive wholesale power market, as the state deregulated the industry;
- The sale of the Indian Point 3 and James A. FitzPatrick nuclear power plants in 2000 to Entergy Corp. for a then-record price of \$967 million, in an agreement that protected the job security of the nuclear employees transferred to Entergy;
- A new 50-year federal operating license issued in 2003 for the St. Lawrence Power Project, and major progress toward the 2007 relicensing of the Niagara Power Project;
- Construction in less than a year of 10 small clean power plants in New York City and one on Long Island to ensure sufficient electricity capacity downstate in the summer of 2001. The dispersed units supported the reliability of electricity service in the city in the immediate aftermath of the 9/11 attacks when transmitted power from outside of the city was severely curtailed because of security concerns;
- Pioneering of new transmission-control technology, clean distributed energy applications, and facilitating the introduction of electric-drive vehicles for public entities;
- Partnerships with numerous tax-supported public facilities across the state for improving their energy efficiency from wide-ranging measures for lowering utility bills and greenhouse gas emissions;
- Low-cost power allocations under NYPA-administered economic-development programs anchoring hundreds of thousands of jobs across the state; and
- Prudent financial practices for securing the Power Authority's future and the vital work that it performs for the state's electric power system, economy and environment.

These and numerous other measures attest to Mr. Zeltmann's transformational leadership and long-lasting impact on NYPA and the State of New York.

His accomplishments while at the Power Authority also extended beyond New York, with his serving two, one-year terms as chairman of the Electric Power Research Institute which conducts research, development and demonstration projects for the benefit of the public in the U.S. and internationally.

DISCUSSION

In accordance with Company Policy 1-15: Naming and Dedication of Assets, the proposed individual for whom a NYPA facility is being named should have a "demonstrable record of contributions to NYPA, New York State, or the community in which the asset is located." The examination above clearly shows that Eugene W. Zeltmann meets this standard.

As directed by the policy, a naming committee was formed at the direction of the President and Chief Executive Officer. The committee consisted of two employees—Joseph Kessler, Executive Vice President and Chief Operating Officer, Justin E. Driscoll, Executive Vice President and General Counsel and Michael Balboni, NYPA Trustee. The committee presented its report outlining the contributions and record of service of Mr. Zeltmann during his more than eight years as NYPA's President, including Chief Executive Officer from mid-2002 until he retired in early 2006.

Mr. Zeltmann's outstanding leadership in shaping NYPA's power generation portfolio of clean, reliable and economical electricity and significant other programmatic initiatives that included energy efficiency, economic development and new technologies, makes him one of the pivotal figures in the

Power Authority's 87-year history. The 500-MW Combined-Cycle Plant, licensed, designed and constructed during Mr. Zeltmann's time at NYPA, is one of the key facets of his distinguished legacy.

Accordingly, the committee recommends to the President and Chief Executive Officer that the plant be named the Eugene W. Zeltmann Power Project, in honor of Mr. Zeltmann.

RECOMMENDATION

The naming committee recommends that the Trustees approve the naming of the 500 MW Combined Cycle Plant, the Eugene W. Zeltmann Power Project, in accordance with the above, which incorporates the committee's report.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the 500-MW Combined-Cycle Plant at NYPA's 47-acre site in Astoria, Queens, shall be named the Eugene W. Zeltmann Power Project in recognition of the exceptional contributions of Eugene W. Zeltmann during his eight-year leadership of the New York Power Authority, from September 1997 to January 2006; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Power Authority are, and each of them hereby is authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

h. Canal Corporation

i. Procurement (Services) Contract - East Guard Lock Rehabilitation on the Erie Canal - Contract Award

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Board of Directors ('Board') is requested to approve the award of a contract related to Inquiry No. K18-10270594JO to Cold Spring Construction ('Cold Spring') of Akron, New York as the low bidder for the East Guard Lock Rehabilitation on the Erie Canal, in the City of Rochester, Monroe County, New York, in the bid amount of \$5,955,116.16. Due to the need to commence services, the contract (PO #4400002868) with Cold Spring became effective August 29, 2018 for the initial interim award amount of \$1,000,000, subject to the Board's approval as soon as practicable, in accordance with Canal Corporation's Guidelines for Procurement Contracts and Expenditure Authorization Procedures. This construction project has an expected completion date concurrent with the contract completion date of November 28, 2019. All associated expenditures will be paid from the Canal Corporation's capital fund.

In accordance with the Canal Corporation's Procurement Guidelines and Expenditure Authorization Procedures, the Board's approval is required when the award of Contracts and/or Purchase Order Releases exceeds one year in term or the value of such contracts exceeds \$6,000,000.

BACKGROUND

The East Guard lock is located at the junction of the Erie Canal and the Genesee River in the City of Rochester, NY. The guard lock allows for navigation across the Genesee River during the navigation season and dewatering of the canal during the non-navigation season while protecting the Erie Canal from water level fluctuations in the Genesee River throughout the year. The lock, with machinery, was constructed between 1908 and 1918 and is currently in need of repair and rehabilitation.

The contract will address all of the repair needs at the site. Construction activities will include temporary erosion and sediment control devices, clearing and grubbing, as required, installing cofferdam systems, removing and disposing of the eastern counterweights and installing new counterweights, refurbishing the eastern towers, bridge and operating machinery, performing concrete repairs, constructing a new stair tower foundation, fabricating and installing new stairs and a new stair tower, refurbishing the eastern electrical system, removing the western gate, counterweights, operating machinery and electrical components, installing railing, constructing an emergency boat launch, performing Lock House and Storage Building repairs, installing a new septic system and installing a new bottom seal at the West Guard Lock.

DISCUSSION

In response to an advertisement issued on May 31, 2018 for the East Guard Lock Rehabilitation, Inquiry No. K18-10270594JO, five (5) proposals ('bids') were received and publicly opened and read on July 24, 2018. The bids were reviewed by an Evaluation Committee consisting of Corporation staff from Design, Construction, Procurement and New York Power Authority's Strategic Supply Management.

FISCAL INFORMATION

Expenditures for this contract will be paid from the Canal Corporation's Capital Fund, as appropriate.

RECOMMENDATION

The Evaluation Committee recommends that the Board approve the interim contract in the amount of \$1 million for the period August 29 2018 to October 2, 2018, and approve award of the contract (PO #4400002868) related to Inquiry No. K18-10270594JO to Cold Spring Construction of Akron, New York as low bidder for the East Guard Lock Rehabilitation on the Erie Canal, in the bid amount of \$5,955,116.16 with the term ending on November 28, 2019.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.”

The following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Canal Corporation’s Expenditure Procurement Guidelines and Expenditure Authorization Procedures, approval is hereby granted to award construction Contract (PO #4400002868), with a start date of August 29, 2018 and completion date of November 28, 2019, with an interim award of \$1 million and total bid award in the value of \$5,955,116.16, to Cold Spring Construction, Inc. for the construction of the East Guard Lock Rehabilitation on the Erie Canal, in the City of Rochester, Monroe County, New York as recommended in the foregoing report of the President and Chief Executive Officer;

<u>Contractor</u>	<u>Location</u>	<u>Contract Award</u>
Cold Spring Construction	Akron, NY	<u>\$5,955,116.16</u>

K18-10270594JO
PO# 4400002868

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer, and all other officers of the Canal Corporation are, and each of them hereby is, authorized on behalf of the Canal Corporation to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

5. DISCUSSION AGENDA:

a. Strategic Initiatives

i. President and Chief Executive Officer's Report

President Quiniones provided highlights of the Authority's performance, to date, to the Board (Exhibit "5a i-A").

NYPA's Overall Performance

Regarding the Authority's overall performance, all of the key performance indicators are meeting or exceeding their targets. President Quiniones said that after reviewing the Performance Forecast, he is confident that by the end of the year all of the key Performance Indicators will meet their targets. NYPA continues to be very active in implementing its mission for the state of New York.

Senior Leadership Additions

NYPA has two additions to its Executive Management team. In June, Mr. Lee Garza, was on-boarded as Senior Vice President of Finance, and, more recently, Ms. Sarah Salati as Executive Vice President and Chief Commercial Officer.

"Reimagining the Canals" Contest

At the World Canals Conference in Syracuse last year, NYPA announced a global competition to get the best ideas on how it can reimagine the Canals; NYPA received 145 entries from around the world. Using a panel of experts in urban planning, economic development and the Canals, the entries were narrowed-down to seven finalists. NYPA has been working with those seven finalists to sharpen their proposals and on October 3, 2018, the winners of the "Reimagining the Canals" global competition will be announced at an event in Rochester. President Quiniones said that this action would also inform the Authority's ongoing strategic planning for the Canal Corporation as requested by the Board.

New York State Energy Policy Goals

To date, the Authority has created 151,000 clean energy jobs associated with the state's Energy Policy goals.

In 2025, the goal is to have a total of 1,500 megawatts of connected energy storage to the grid. Energy storage is critical because as more solar and wind, which are both intermittent sources of electric supply, are injected, it helps to balance the grid.

Another goal that NYPA has set for the state is energy efficiency for end-use savings of one hundred eighty-five trillion BTUs (185Tbtu) of efficiency from buildings and industrial and manufacturing facilities statewide.

Based on the 1990 levels of greenhouse gas inventory, NYPA estimates that it will achieve at least half of its greenhouse gas reduction, which is 40 percent by 2030.

In addition, the state's goal is to have 50 percent of electricity supply from renewable energy by 2030 and the Governor announced that part of it should be 2.4 gigawatts from offshore wind. To that end, NYSERDA is planning to issue an RFP later this year for Phase 1 of its offshore wind solicitation. All of NYPA's large-scale renewable initiatives and customer energy solutions requests to the Board for approval point towards the state's energy goals for 2025 - 2030.

b. Financial Operations

i. Chief Financial Officer's Report

Mr. Lee Garza, Senior Vice President of Financial Operations & Acting Controller, provided an update of the Authority's financial performance, to date, to the Board (Exhibit "5b i-A").

Net Income

Net income for the seven months ended July 31, was \$62 million. This is \$13.9 million higher than the budgeted amount of \$48.1 million.

- The \$13.9 million positive Net Income variance was driven by higher Margins and \$5.4 million in lower operating expense; i.e., marginally higher Net Interest Expense set this positive Net Income variance.
- The \$9.7 million positive Margin variance was driven primarily by sales of excess fuel inventory and higher-than-budgeted contracted revenues.
- The positive Operating Expense variance is associated with lower O&M and administrative expenses, as well as lower programmatic costs.
- The \$1.2 million negative variance that is associated with Net Interest Expense is due to noncash, market-to-market losses in the Authority's investment portfolio.

2018 Year-End Forecast

The Net income forecast is \$91.9 million. This forecast is based on seven months of actual expenses through July, and five months of remaining forecast in August through December.

- For year-end 2018, the Net Income forecast is \$15 million ahead of the budget. This \$15 million positive Net Income variance is driven by higher Margins and lower Net Interest Expense, and offset by marginally-higher Operating Expenses.
- The \$14.5 million positive Margin variance is associated primarily with improved market conditions and the environment in which NYPA generations operate, as well as factors identified in the year-to-date performance, i.e., sales of fuel energy, excess fuel inventory, and higher contracted revenues.
- The \$3.7 million negative variance is associated with a number of factors, including post-budgetary expenditures associated with NYPA's strategic programs, and offset by lower-than-budgeted benefits related costs.
- The \$4.2 million positive Net Interest Expense variance is associated with Net Interest forecast through the year related to the timing of that issuance, which has been rescheduled for future periods.

c. Utility Operations

i. Chief Operations Officer's Report

Mr. Joseph Kessler, Executive Vice President and Chief Operations Officer provided highlights of Operations' performance, to date, and staff's recommendations to the Board.

Mr. Kessler said that based on the Performance Metrics, the Authority's operational performance exceeded its targets. He continued that, based on the Board's guidance, the Authority continues to implement *Vision 2020* and, to the extent possible, accelerate activities to deliver customer value. The Infrastructure Modernization Strategic Initiatives, comprised of Smart Generation & Transmission and Asset Management, focus on deploying technologies to increase reliability and resiliency as well as situational awareness in order to provide actionable insights to improve asset performance and help the Authority make better business and operational decisions.

As a result, the members are requested to approve the following staff recommendations.

In summary:

- The "Sensor Deployment" and "Communications Backbone" Projects focus on the value that data provides. By aggregating asset data in a consistent manner and then transmitting it to the iSOC and other analytical platforms, the Authority is enabling staff to become Digital Workers;
- The "Moses-Adirondack Smart Path Reliability Project" will strengthen a key portion of New York state's transmission system by replacing aging infrastructure to ensure NYPA's ability to continue meeting its energy demands;
- The new "Clark Energy Center – Utica Visitors Center" Project demonstrates NYPA's commitment to the community and the power industry, consistent with NYPA's hydro facilities; and
- The Procurement (Services) Contracts allow the Authority to be flexible by having a pool of resources available to respond to its needs across the organization.

**1. Smart Generation & Transmission Strategic Initiative -
Sensor Deployment Program - Capital Expenditure
Authorization Request and Contract Award**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to authorize capital expenditures in the amount of \$95,685,754 for the Smart Generation & Transmission Strategic Initiative - Sensor Deployment Program ('SD Program').

The total estimated cost of the SD Program is \$107.8 million, of which \$12.1 million was previously approved in March 2018. This request is to approve the remaining funds for execution of Phase II of the SD Program, which includes the enterprise-wide installation of new sensors executed by a Design Build ('DB') contract.

The Trustees are also requested to ratify the award of a five-year DB contract for Phase II of the SD Program, in the amount of \$76,172,207.19 to E-J O'Connell Sensor Deployment Joint Venture ('JV') of Long Island City, NY. Interim funding in the amount of \$1,000,000 was previously approved by the Chief Operating Officer to allow for project initiation costs and to maintain schedule.

BACKGROUND

In accordance with the Authority's Capital Planning and Budgeting Procedures, capital expenditures in excess of \$6 million require the Trustees' approval.

Section 2879 of the Public Authorities Law and the Authority's Guidelines for Procurement Contracts require the Trustees' approval for procurement contracts involving services to be rendered for a period in excess of one year. Additionally, in accordance with the Authority's Expenditure Authorization Procedures, the award of non-personal services contracts exceeding \$6 million requires the Trustees' approval.

The SD Program is part of the Authority's Smart Generation & Transmission Strategic Initiative. The goal of the SD Program is to implement a robust, secure, and scalable sensor and communications network that will allow the Authority to:

1. Establish a network connection to the local business area network to transmit real-time asset health parameter data collected from existing and new sensors installed on critical assets to the Integrated Smart Operations Center ('iSOC') in the White Plains Office.
2. Install new sensors on critical assets to provide additional asset health parameters.
3. Install data processing and diagnostic software to monitor asset health and transmit data to the iSOC.

DISCUSSION

The SD Program will be completed in multiple phases. Phase I, which is ongoing, consists of engineering, design, and implementation of network connections to existing sensors on critical generation and transmission assets throughout the Authority's facilities. Phase II consists of a competitively-bid, DB contract to install new sensors enterprise-wide on the Authority's critical assets. The scope-of-work also includes network connections for the sensors, as well as testing and commissioning to ensure that all data from the sensors are properly transmitted and displayed in the iSOC.

On February 6, 2018, the Authority issued a Request for Proposal ('RFP') for Phase II of the SD Program, RFP No. Q18-6382MR, through the Ariba system and advertised in the *NYS Contract Reporter*. On May 10, 2018, three proposals were received. After receipt of the bids, and based on the exceptions provided in the bidders' proposals, the evaluation committee recommended that the RFP be cancelled and rebid. On May 23, 2018, the rebid RFP was issued through the Ariba system and advertised in the *NYS Contract Reporter*. As a result, on June 21, 2018, four proposals were received.

The proposals were reviewed and evaluated based on: proposal completeness, ability to meet the schedule, experience in performing this type of work, key team member references, work plan approach, demonstration of capability in installation of networking systems and cabling, cost, M/WBE goal requirements and safety record.

After multiple rounds of reviews and negotiations, the Evaluation Team requested a Best and Final Offer from the low bidder which was received on August 14, 2018.

A future phase of the SD Program, identified as Phase IIB, will focus on sensors, specifically for the monitoring of transmission lines. This Phase is being reviewed by Technology and Innovation and other internal groups and, therefore, at this time, the costs for Phase IIB are not included in the total estimated SD Program cost. Additionally, a future Phase III is also planned which will consist of the identification, development, and design of custom sensors that will provide additional data of critical assets. Phase III will require additional research and development, and, as such, Phase III costs are also not currently included in the total estimated SD Program cost. Once the scope is further defined, the total cost will be updated.

Due to the significant number of assets that will be affected across the Authority's fleet, an estimate has been developed for the as-built, record drawing and document effort. This estimate will be refined as the SD Program progresses and once the JV is on board.

Capital expenditures in the amount of \$12,108,100 were previously approved for implementation of Phase I and planning for Phase II of the Program.

The previous cost estimate for the total SD Program, which was presented at the March 2018 Trustee meeting, was \$55.8 million. The CEAR estimate has increased to \$107.8 million, which includes additional sensors and scope added to the SD Program. The estimate has been updated using actual costs associated with the Phase II contract.

The total SD Program cost for Phase I and Phase II is currently estimated at \$107,793,847 as follows:

Preliminary Engineering/Engineering Design	\$ 3,604,206
Material Procurement & Construction/Installation	\$ 88,789,351
Authority Direct and Indirect Expenses	<u>\$ 15,400,290</u>
TOTAL	<u>\$107,793,847</u>

FISCAL INFORMATION

Payment associated with the SD Program will be made from the Authority's Capital Fund and approximately 78% of the cost will be recovered under the Authority's Annual Transmission Revenue Requirement and the Hydro Cost-of-Service.

RECOMMENDATION

The Senior Vice President and Chief Engineer – Operations Support Services, the Senior Vice President – Innovation & Technology, the Vice President – Project Management, the Vice President – Strategic Operations, the Vice President – Strategic Supply Management and the Project Manager recommend that the Trustees approve capital expenditures in the amount of \$95,685,754 and ratify the award of a five-year Design Build contract in the amount of \$76,172,207.19 to E-J O'Connell Sensor Deployment Joint Venture ('JV') of Long Island City, NY for Phase II of the Smart Generation & Transmission Strategic Initiative - Sensor Deployment Program.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Authority's Capital Planning and Budgeting Procedures, capital expenditures in the additional amount of \$95,685,754, for a total of \$107,793,847, are hereby authorized for the Smart Generation & Transmission Initiative – Sensor Deployment Program in accordance with, and as recommended in, the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Authority intends to issue debt to finance the capital costs of the Smart Generation & Transmission Initiative Sensor Deployment Program, Phases I & II;

<u>Capital</u>	<u>Expenditure Authorization</u>
Smart Generation & Transmission Initiative Sensor Deployment Program, Phase I & II	<u>\$107,793,847</u>

AND BE IT FURTHER RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority, approval is hereby granted to award a five-year contract to E-J O'Connell Sensor Deployment Joint Venture ("JV") of Long Island City, NY in the amount of \$76,172,207.19 to Design-Build Phase II of the Sensor Deployment Program;

<u>Capital</u>	<u>Expenditure Authorization</u>
E-J O'Connell Sensor Deployment JV Long Island City, NY	<u>\$76,172,207.19</u>

Q18-6382MR

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

**2. Smart Generation & Transmission Strategic Initiative -
Communication Backbone Program – Phase II -
Capital Expenditure Authorization Request**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve capital expenditures in the amount of \$77,521,185 for Phase II of the Communication Backbone Program ('Program'). Phase II of the Program includes installation of fiber optic cables on existing transmission towers in Central, Northern, and Western New York, engineering and construction and fiber electronic equipment for fiber communications.

This capital expenditure request is part of the larger Program which is currently estimated at \$153 million. Request for approval of the balance of the capital expenditures is anticipated in 2019.

BACKGROUND

In accordance with the Authority's Capital Planning and Budgeting Procedures, capital expenditures in excess of \$6 million require the Trustees' approval.

The Program is a foundational element of the Authority's Smart Generation & Transmission ('Smart G&T') Strategic Initiative. The goal of the Program is to establish a dedicated, redundant communications network that builds on the Authority's existing infrastructure and is integrated into the long-term asset strategy while leveraging available infrastructure from independent dark-fiber service providers to reduce dependency on commercial telecommunication providers.

Once completed, the Authority will have a dedicated, robust, secure, and scalable communications network that supports:

1. Replacement of legacy point-to-point circuits that will inevitably need to be retired.
2. Increased data flow from a host of intelligent end-point devices deployed throughout the Authority's generation and transmission assets.
3. Enabling capabilities of key components of the Strategic Vision including the Integrated Smart Operating Center ('iSOC') and the Emergency Energy Control Center.
4. Improved analytics to promote improved business and operational decisions.

The redundant network will leverage existing infrastructure and new installations including fiber Optical Ground Wire ('OPGW') and Optical Attached Cable ('OPAC'), which will be installed on the Authority's existing transmission towers.

DISCUSSION

The previous cost estimate for the total Program, which was presented at the March 2017 Trustees' meeting, was approximately \$39 million. The CEAR estimate has increased to \$153 million, which includes installation of approximately 600 miles of OPGW, mainly in Western and Central NY.

The additional scope includes installing OPGW in the following segments:

1. Moses to Massena
2. Massena to Clark Energy Center
3. Moses – Willis – Plattsburgh
4. Niagara to Clark Energy Center
5. Utica to Cooper's Corner

Capital expenditures in the amount of \$22,784,290 were previously approved for implementation of Phase I and planning for Phase II. Approval of this request will bring the total amount authorized, to date, to \$100,305,475.

The Program cost for Phase II which includes costs from the original estimate is \$77,521,185 and is as follows:

Preliminary Engineering/Engineering Design	\$ 6,568,390
Material Procurement & Construction/Installation	\$ 64,844,036
Authority Direct and Indirect Expenses	<u>\$ 5,696,787</u>
TOTAL	\$ 77,521,185

The first components of the Program in the Central New York Catskill Region, and the Northern to Central New York regions, involving the installation of optical ground wire, leasing of dark fiber, and upgrading analog microwave equipment to digital, have been assessed under NYPA's State Environmental Quality Review Act ('SEQRA') regulations. Program work not previously authorized under NYPA's earlier SEQRA process is subject to NYPA's continuing SEQRA assessment. New Program construction activities will only begin following the completion of any new SEQRA assessment.

FISCAL INFORMATION

Payment associated with this Program will be made from the Authority's Capital Fund and approximately 87% of the cost will be recovered under the Authority's Annual Transmission Revenue Requirement and the Hydro Cost-of-Service.

RECOMMENDATION

The Senior Vice President and Chief Engineer – Operations Support Services, the Senior Vice President – Technology & Innovation, the Senior Vice President – Power Supply, the Vice President – Project Management, the Vice President – Strategic Operations, and the Project Manager recommend that the Trustees approve capital expenditures in the amount of \$77,521,185 for Phase II of the Communication Backbone Program.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Authority's Capital Planning and Budgeting Procedures, capital expenditures in the amount of \$77,521,185 are hereby authorized in accordance with, and as recommended in, the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Authority intends to issue debt to finance the capital costs of the Smart Generation & Transmission Initiative Communication Backbone Program – Phase II;

<u>Capital</u>	<u>Expenditure Authorization</u>
Smart Generation & Transmission Initiative Communication Backbone Program - Phase II	<u>\$77,521,185</u>

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

3. Moses-Adirondack Smart Path Reliability Project – Phase II - Capital Expenditure Authorization Request

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve capital expenditures in the amount of \$124 million for Phase II of the Moses-Adirondack Smart Path Reliability Project ('Project'). Phase II includes the continued efforts related to the New York State Public Service Commission's ('PSC') Article VII application and detailed engineering design. In addition, the following materials and services will be procured: pole and foundation steel, laydown yards, logistics and construction services. Funds in the amount of \$18.6 million were previously approved for this Project.

This capital expenditure request is part of the larger Project which is currently estimated at \$483.8 million. Request for approval of the balance of the capital expenditures is anticipated after the Environmental Management & Construction Plan ('EM&CP') is approved by the PSC, which is expected in mid-2019.

BACKGROUND

In accordance with the Authority's Capital Planning and Budgeting Procedures, capital expenditures in excess of \$6 million require the Trustees' approval.

The existing Moses-Adirondack 1&2 Lines ('MA 1&2 Lines') originate in the St. Lawrence Moses Substation in Massena, New York. From the Moses Substation, the lines generally traverse in a south and southwestern direction for approximately 86 miles, terminating in the Adirondack Substation in Croghan, New York. The MA 1&2 Lines are on double-circuit steel lattice structures for the first eight miles, and the remaining 78 miles are supported by single-circuit wooden H-frame structures. The two circuits were originally constructed by the United States Department of Defense in 1942 and acquired by the Authority in 1953. The portion of the lines supported by the wooden H-frame structures have reached the end of their useful life, require frequent maintenance, and are at risk for catastrophic failure.

The Project will replace the 78 miles of wooden transmission structures with new single-circuit monopole structures that can support 345kV transmission, but will operate at 230kV until the full length of the transmission system is upgraded. The new structures will be located within the Authority's existing right-of-way. Construction will be sequenced to minimize outages on the MA 1&2 Lines and the 765kV Massena Substation – Utica Line ('765kV MSU Line'). Optical ground wire will also be installed along the entire transmission line over both circuits to facilitate the Authority's Communication Backbone Program.

This Project will provide a statewide reliability benefit in support of the NYISO's System Restoration Program ('Blackstart'), access to renewable integration and low-cost generation, as well as a reduction in costs to consumers due to maintenance and unexpected outages on the MA 1&2 Lines and the 765kV MSU Line.

DISCUSSION

At their September 29, 2015 and December 17, 2015 meetings, the Trustees authorized capital expenditures and contract awards to begin obtaining environmental permits, licensing certificates, and preliminary engineering work for the Project which original scope included replacing the existing MA 1&2 Lines with 230kV lines on double-circuit steel monopole structures.

Subsequently, the scope of the Project was modified to upgrade the MA 1&2 Lines to support future 345kV which will allow New York State to enhance its ability to bring renewable energy resources from northern New York to the southern New York load zones.

Due to the modified Project scope, at the September 26, 2017 meeting, the Trustees authorized additional capital expenditures and an increase in the funding for the five-year contract with Burns & McDonnell Consultants, Inc. for engineering, design, and construction support services.

The Article VII application for the Project was submitted to the PSC on April 5, 2018. Ongoing support will be required until the certificate is issued, which is expected in 2019.

Engineering and environmental assessments continue to progress and the EM&CP document is being prepared. The procurement and contracting strategy has been developed to mitigate risk and determine the most cost-effective method of implementing this Project, anticipated to be completed in 2023. The previous estimate for the project was \$440 million and the new estimate is \$483.4 million. The increased Project cost estimate is due to further engineering design and escalation of costs through Project completion.

This capital expenditure authorization request is comprised of the following:

Licensing and Engineering	\$ 2,999,400
Procurement	\$ 108,000,000
Construction	\$ 3,985,200
Authority Direct and Indirect Expenses	<u>\$ 9,062,300</u>
TOTAL	<u>\$ 124,046,900</u>

FISCAL INFORMATION

Payment associated with this Project will be made from the Authority's Capital Fund and 100% of the cost will be recovered under the Authority's Annual Transmission Revenue Requirement.

RECOMMENDATION

The Senior Vice President and Chief Engineer – Operations Support Services, the Senior Vice President – Power Supply, the Vice President – Project Management, the Vice President – Project & Business Development, and the Project Manager recommend that the Trustees approve capital expenditures in the amount of \$124 million for Phase II of the Moses-Adirondack Smart Path Reliability Project.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.”

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Authority's Capital Planning and Budgeting Procedures, capital expenditures in the amount of \$124,046,900 for continuation of the Moses-Adirondack Smart Path Reliability Project are hereby authorized in accordance with, and as recommended in, the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Authority intends to issue debt to finance the capital costs of the Moses-Adirondack Smart Path Reliability Project – Phase II;

<u>Capital</u>	<u>Expenditure Authorization</u>
Moses-Adirondack Smart Path Reliability Project - Phase II	<u>\$124,046,900</u>

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

4. Clark Energy Center - Utica Visitors Center - Capital Expenditure Authorization Request and Contract Award

The President and Chief Executive Officer submitted the following report:

"SUMMARY"

The Trustees are requested to authorize capital expenditures in the amount of \$25.5 million and ratify the award of a two-year contract to LeChase Construction Services, LLC ('LeChase') of Rochester, NY, in the amount of \$15.7 million for construction of the Utica Visitors Center ('UVC') for the Clark Energy Center ('CEC').

Capital expenditures for this project in the amount of \$821,639 were previously approved. Interim funding for the contract award to LeChase, in the amount of \$500,000, was approved by the Executive Vice President and Chief Operating Officer on September 13, 2018.

In support of this Project, the Authority will enter into a License agreement and a Memorandum of Understanding with the City of Utica for the long-term use of approximately two acres of real property within the City's Roscoe Conkling Park to serve as the site for the UVC.

BACKGROUND

In accordance with the Authority's Capital Planning and Budgeting Procedures, capital expenditures in excess of \$6 million require the Trustees' approval.

Section 2879 of the Public Authorities Law and the Authority's Guidelines for Procurement Contracts requires the Trustees' approval for procurement contracts involving services to be rendered for a period in excess of one year. Additionally, in accordance with the Authority's Expenditure Authorization Procedures, the award of non-personal services contracts exceeding \$6 million require the Trustees' approval.

The Authority currently has Visitors' Centers at each of its large hydroelectric facilities. The UVC will represent CEC, the Authority's transmission hub. The Visitors Center will be a state-of-the-art museum showcasing the history, present and future state of electricity and the transmission grid within New York State. This facility will be located on a City of Utica property adjacent to the Utica Zoo, a major tourist destination. Co-location of the Center will promote tourism activities that will benefit the Authority, the power industry, the City of Utica, Oneida County and New York State. The Center will also benefit the local educational institutions as it will host Science, Technology, Engineering, (Art) and Math ('STEM/STEAM') programs for K-12 students free of charge.

DISCUSSION

The scope of this project includes site development and building construction as well as content development, detailed design, fabrication, and installation of exhibits that will feature new hands-on interactive elements, wall-mounted exploration stations, wall and table-mounted touch-screen technologies, and other interactive exhibits. It also includes a state-of-the-art ultra-high definition 4D-Theater and film production.

The Authority issued a Request for Proposal ('RFP') No. Q18-6481KS, which was advertised in the NYS *Contract Reporter* on June 29, 2018. On August 17, 2018, two proposals were received through Ariba e-Sourcing as summarized in the table below. The Authority's Fair Cost Estimate for this work is \$14,920,500.

Bidders	Submitted Proposal Price	Evaluated Proposal Price
LeChase Construction Services, LLC	\$14,773,000.00	\$15,700,000.00
Murnane Building Contractors	\$16,100,000.13	\$17,027,000.13
<i>Authority's Fair Cost Estimate</i>	<i>\$14,920,500.00</i>	<i>\$15,475,500.00</i>

The proposals were reviewed by an evaluation committee comprised of staff from CEC, Engineering, Public Affairs, Real Estate, Strategic Supply Management and Project Management. Based on the bid evaluation, an additional cost of \$927,000 was added to each submitted proposal to account for costs associated with the utility construction services. Exhibits and theater fabrication, installation, and the content development will be bid under separate contracts.

The committee concluded that LeChase submitted the lowest-priced and technically acceptable bid. LeChase has extensive experience in construction of this magnitude, has performed well on previous Authority projects, has demonstrated knowledge of the scope-of-work and is capable of completing this project in accordance with the schedule. LeChase did not take any technical exceptions and all exceptions to the commercial terms and conditions have been resolved with no change to their proposed cost. The company's submittal in response to the RFP's M/WBE goal requirements has been found acceptable to the Authority's Supplier Diversity Group. The contract work is expected to be substantially completed by December 2019.

Preliminary funding in the amount of \$821,639 was previously approved in order to perform engineering and other site survey and investigations. This total capital expenditure authorization request is comprised of the following:

Preliminary Engineering	\$ 821,639
Detailed Engineering	\$ 210,000
Equipment Procurement	\$ 5,347,500
Construction/ Installation	\$ 16,995,000
Authority Direct and Indirect Expense	\$ 2,105,900
Total	\$ 25,480,039

FISCAL INFORMATION

Payments associated with this project will be made from the Authority's Capital Fund.

RECOMMENDATION

The Senior Vice President and Chief Engineer – Operations Support Services, the Vice President – Project Management, the Vice President – Strategic Supply Management, the Regional Manager – Transmission, and the Project Manager recommend that the Trustees authorize capital expenditures in the amount of \$25.5 million and ratify the award of an eighteen-month contract to LeChase Construction Services, LLC of Rochester, NY, in the amount of \$15.7 million for construction of the Utica Energy Zone Visitors Center for the Clark Energy Center.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Authority's Capital Planning and Budgeting Procedures, capital expenditures in the amount of \$25.5 million are hereby authorized for construction of the new Utica Visitors Center for the Clark Energy Center in accordance with, and as recommended in, the foregoing memorandum of the President and Chief Executive Officer; and be it further

RESOLVED, That the Authority intends to issue debt to finance the capital costs of the construction of the new Utica Visitors Center for the Clark Energy Center;

<u>Capital</u>	<u>Expenditure Authorization</u>
Clark Energy Center Utica Visitors Center	<u>\$25.5 million</u>

AND BE IT FURTHER RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority, approval is hereby granted to award a two-year contract to LeChase Construction Services, LLC in the amount of \$15.7 million to furnish all labor, materials, and equipment to construct the new Utica Visitors Center;

<u>Contractor</u>	<u>Contract Approval</u>
LeChase Construction Services, LLC Rochester, NY	<u>\$15.7 million</u>

Q18-6481KS

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

**5. Procurement (Services) Contracts -
On-Call Program/Project Management
Services Master Service Agreements -
Additional Funding Authorization Request**

The President and Chief Executive Officer submitted the following report:

"SUMMARY

The Trustees are requested to approve additional funding for previously-approved five-year personal services contracts for On-Call Program/Project Management Services in the aggregate not-to-exceed additional amount of \$15 million to the three firms: AECOM USA Inc. of New York, NY; CHA Consulting Inc. of Albany, NY; and K&L Engineering Consulting, P.C. of White Plains, NY. This additional funding will raise the total aggregate, not-to-exceed contract authorization to \$40 million. The term of the contracts, expiring in 2022, will remain the same.

BACKGROUND

At the December 2017 Trustees' meeting, the On-Call Program/Project Management Services contracts were approved for five years, and for an aggregate not-to-exceed amount of \$25 million.

With the growing number projects, the Authority has a need to retain and utilize qualified program/project/ construction management firms to support these major projects. The following are examples of such projects:

1. The Transmission Life Extension and Modernization ('LEM') Program is a multiyear, multilayer program that involves the upgrade of the Authority's state-wide transmission system to maintain availability, reliability and to ensure regulatory compliance.
2. The Moses-Adirondack Smart Path Reliability Project is the rebuild of the Authority's Moses-Adirondack transmission lines. These lines are essential for system reliability and system restoration. This project will remove the old wooden H-frame structures and rebuild with modern steel monopole structures. Smart Path begins in Massena NY and ends in Croghan NY, a distance of approximately 78 miles.
3. Additional LEM Programs, also currently in the planning stages, include the Robert Moses Plant at the Niagara Power Project, Y49 and Q35 Transmission Feeders, and the White Plains Office.
4. The Energy Services Program is available to the Authority's customers statewide. Types of projects may include HVAC, lighting, and central plant upgrades at universities, waste water treatment facilities, school districts, and correctional facilities. In addition, the Authority will look to evaluate new types of programs and technologies to assist the Authority's customers to meet their energy goals.

Based on the planned portfolio of projects sought to be implemented, an additional \$15 million authorization for the same five-year term is being requested.

FISCAL INFORMATION

Services under these contracts will be provided on an 'as-needed' basis and/or availability, using the hourly rates. Payments will be made from the Authority's Capital or Operating Fund, as appropriate.

RECOMMENDATION

The Senior Vice President – Operations Support Services and Chief Engineer, the Vice President – Project Management, the Vice President – Energy Efficiency, the Vice President – Strategic Supply Management, the Vice President – Strategic Operations, and the Project Manager recommend that the Trustees approve additional funding authorization for previously-awarded five-year contracts for the On-Call Program/Project Management Services in the aggregate not-to-exceed amount of \$15 million to AECOM USA Inc., CHA Consulting Inc. and K&L Engineering Consulting, P.C., raising the aggregate, not-to-exceed contract authorization to \$40 million.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.”

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority and the Authority’s Expenditure Authorization Procedures, approval is hereby granted for additional funding authorization for previously-awarded, five-year contracts for the On-Call Program/Project Management Services in the aggregate not-to-exceed additional amount of \$15 million to AECOM USA, Inc., CHA Consulting, Inc. and K&L Engineering Consulting, P.C., as recommended in the foregoing report of the President and Chief Executive Officer;

<u>Contractor</u>	<u>Location</u>	<u>\$15 million aggregate</u>
• AECOM USA Inc.	New York, NY	
• CHA Consulting Inc.	Albany, NY	
• K&L Engineering Consulting, P.C.	White Plains, NY	

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

**6. Procurement (Services) Contract -
Transmission & Distribution (T&D)
Emergency Response and Management
Services - Contract Awards**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to approve the award of multi-year construction contracts to the following six companies: D & D Power LLC ('D&D'), E-J Electric T&D LLC ('E-J'), J.W. Didado Electric, LLC ('JWD'), Haugland Energy Group LLC ('HEG'), Northline Utilities, LLC ('NLU') and M10, Inc. ('Michels Corporation Inc. (Michels)'), for an aggregate amount of \$15 million and for a term of up to five years to supplement the Authority's own emergency response and management ('ERM') capabilities. The contracts will also cover ERM services for the Authority's high-voltage transmission and distribution systems and will provide mutual aid to the other utilities.

BACKGROUND

In accordance with the Authority's Guidelines for Procurement Contracts and Expenditure Authorization Procedures, the award of construction services contracts in excess of one year and an amount in excess of \$6,000,000 requires the Trustees' approval.

On April 2, 2018, Inquiry # Q18-6416MR, request for qualification ('RFQ'), was issued soliciting information from qualified companies that have the capabilities, capacity and experience with the construction, maintenance and restoration of high voltage transmission lines.

On May 7, 2018, fifteen (15) companies submitted their qualification responses to the RFQ. The submittals were evaluated by a multidisciplinary team (the Evaluation Team) which was comprised of Civil/Structural Engineering, Strategic Supply Management, Project Management, T&D Operation / Emergency, Health and Safety, Environmental and Permitting and an external consultant. In addition to safety performance records, organizational and financial stability, the suppliers were evaluated based on their technical and operational capabilities, capacity and experience with respect to the construction, maintenance and restoration of transmission and distribution networks.

Nine (9) companies D & D Power LLC ('D&D'), E-J Electric T&D LLC ('E-J'), J.W. Didado Electric, LLC ('JWD'), Haugland Energy Group LLC ('HEG'), Henkels & McCoy, Inc. ('H&M'), M10, Inc. ('Michels Corporation (Michels)'), Northline Utilities, LLC ('NLU') and PAR Electrical Contractors, Inc. ('PAR'), were deemed qualified to perform the ERM services. These companies were invited to submit proposals, resource and equipment through a competitive RFP, Inquiry # Q18-6483DK.

On July 11, 2018, six (6) proposals were received from the following companies via the ARIBA cloud:

- 1) D&D Power Inc., Latham, NY
- 2) E-J Electric T&D LLC (E-J Electric Installation/E-J), Wallingford, CT
- 3) Haugland Energy Group LLC, Plainview, NY
- 4) J.W. Didado Electric, LLC, Akron, OH
- 5) M10, Inc. (Michels Corporation), Brownsville, WI
- 6) Northline Utilities, LLC, Au Sable Forks, NY

DISCUSSION

Proposals were reviewed by an Evaluation Team comprised of representatives from Strategic Supply Management (D. Keough, Power Supply (P. Toia), and Transmission (M. Fuchs and W. Senior).

After review of the bids based on the evaluation criteria outlined in the RFP, the Evaluation Committee held clarification meetings with the bidders on August 2, and 3, 2018, which led to the Authority's issuance of a post-bid addendum ('PBD') in order to normalize the rates. Additional conference calls were scheduled during the week of August 12, for the purpose of obtaining additional information and for the bidders to clarify their proposals. The meetings resulted in the submittal of the proposers' best and final offers.

Below is the summary of the storm rates for the State of New York.

ROLE/ ACTIVITY	Storm Hourly Rate - New York Local 1249						
	AVG RATE	D&D	EJ Electric	Haugland	JW Didado	Michels	Northline
Coordinator	\$260.87	\$256.36	\$260.15	\$298.30	\$307.60	\$209.94	\$232.85
Field Safety Specialist	\$239.49	\$256.36	\$260.15	\$272.08	\$261.28	\$175.96	\$211.08
General Foreman	\$259.10	\$256.36	\$250.68	\$283.19	\$275.86	\$243.92	\$244.56
Foreman	\$246.43	\$243.56	\$237.42	\$272.08	\$261.28	\$231.41	\$232.85
Working Foreman / Chief	\$239.95	\$238.08	\$231.74	\$260.97	\$255.03	\$226.04	\$227.82
Journeyman Lineman	\$220.81	\$218.80	\$212.80	\$238.75	\$235.26	\$208.16	\$211.08
Lineman Ground Man	\$188.79	\$201.52	\$193.86	\$149.81	\$212.76	NO BID	\$185.98
Apprentice Lineman	\$195.96	\$201.52	\$193.86	\$216.49	\$204.93	\$181.33	\$177.61
Vehicle/Fleet Mechanic	\$197.69	\$192.38	\$174.92	\$238.75	\$212.76	\$181.33	\$185.98
Journeyman Treeman	\$214.55	\$218.80	\$212.80	\$234.00	\$192.60	NO BID	NO BID
Apprentice Treeman	\$203.02	\$201.52	\$193.86	\$214.87	\$201.83	NO BID	NO BID
Flagger	\$125.20	\$117.92	\$108.64	\$116.45	\$125.75	\$163.44	\$119.02

OVERVIEW OF THE RECOMMENDED COMPANIES:

D&D and HEG will be awarded contracts that cover the Authority's own ERM services across high-voltage transmission and distribution systems and provide mutual aid to the other utilities and municipalities in the state of New York only. D&D, a NY State-based company, coupled with its experience and familiarity with the New York State ('NYS') power distribution circuit, is of tremendous value to NYPA. Both D&D and HEG have the required experience necessary to perform ERM services across NYS, should the need arise. In addition, HEG brings the benefits of having recently provided EMR services to Puerto Rico. Both D&D and HEG proposed annual rate adjustments to their hourly rates based on the collective bargaining agreements.

E-J's and NLU's contracts will cover the Authority's own ERM services across high-voltage transmission and distribution system and provide mutual aid to the other utilities and municipalities in the state of New York and to others, as appropriate. Both companies are currently under contracts for EMR services with major utilities throughout the US. E-J indicated that their response time is between 4 to 8 hours, upon notification. E-J Electric is also a New York State-based company with operations centers, resources and equipment strategically placed across the country and is an added benefit to the Authority. Furthermore, NLU is currently one of the two suppliers with a value contract with NYPA for EMR services and has performed a number of services on the Authority's assets. Both E-J and NLU took no exceptions.

JWD and Michels have the capability to perform EMR services on behalf of the Authority and to other utilities and municipalities and other locations, as appropriate. JWD, a wholly-owned subsidiary of Quanta Services, Inc., has provided complete electrical services for T&D projects in New Jersey and the Northeast region of the United States for nearly 60 years. With access to Quanta's extensive resources, including a robust financial portfolio, JWD can perform EMR services throughout the United States. Michels, which is now a top tier T&D contractor, has provided ERM and power restoration following major storms and natural disasters across United States, including Hurricane Matthew, Ivan, Irene, Sandy, Irma, Maria and numerous Nor'easter storms. In addition to the large-scale events which require hundreds of staff for many weeks, Michels has responded to small localized storms requiring smaller crews. Michels is currently one of the two suppliers with a value contract with the Authority's ERM services and has previously performed work, e.g. Optical Groundwire ('OPGW') replacement for the Authority. Both JWD and Michels took no exceptions.

Overall, all six (6) firms are technically qualified and maintain the resources and equipment to provide the required services in the event of a request for ERM services.

FISCAL INFORMATION

Payments associated with this project will be made from the Authority's Capital or Operational Fund, as appropriate.

RECOMMENDATION

The Senior Vice President and Chief Engineer – Operations Support Services, the Senior Vice President – Innovation & Technology, the Vice President – Project Management, the Vice President – Strategic Operations, and the Project Manager recommend that the Trustees approve contract awards in the aggregate amount of \$15 million and a term of up to five years to supplement the Authority's own emergency response and management ('ERM') capabilities, cover ERM services for the Authority's high-voltage transmission and distribution systems and provide mutual aid to the other utilities.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That pursuant to the Guidelines for Procurement Contracts adopted by the Authority and the Authority's Expenditure Authorization Procedures, approval is hereby granted to award construction contracts to the companies listed below in the aggregate amount of \$15 million and for a term of up to five years to supplement the Authority's own emergency response and management ("ERM") capabilities, cover ERM services for the Authority's high-voltage transmission and distribution systems and provide mutual aid to the other utilities, as recommended in the foregoing report of the President and Chief Executive Officer;

Contractors

Contract Approval

Up to 5 years
\$15 million
(aggregate)

1. D & D Power LLC
2. E-J Electric T&D LLC
3. J.W. Didado Electric, LLC
4. Haugland Energy Group LLC
5. Northline Utilities, LLC
6. M10, Inc. (Michels Corp. Inc.)

Q18-6483DK

AND BE IT FURTHER RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all

October 2, 2018

things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

d. Commercial Operations

i. Chief Commercial Officer's Report

Ms. Sarah Salati, Chief Commercial Officer, provided highlights of the Commercial Operations' year-to-date activities to the Board (Exhibit "5d i-A").

Wholesale

- Customer Usage
 - Customer usage and demand remains stable year-to-date;
 - No major increases or decreases in customer usage are expected, given the upcoming fall and winter weather outlook.
- Generation
 - NYPA's overall gross generation is now within 1% of its target.
 - Generation at the hydro units was low during the period January - April due to water flows used for ice management. However, higher temperatures over the course of the summer and associated strong seasonal energy prices drove increased generation both upstate and downstate with July's generation exceeding the budget by 10%.
- Electric Prices
 - Electricity prices year-to-date reflect the higher-than-expected or budgeted electricity prices.
 - While energy price trends in the wholesale market are decreasing in the longer term, electric prices in the near term continue to correlate with natural gas prices and are sensitive to temperatures.
 - In January, the average electric price closed at \$72.27/MWh (Megawatt hour); the higher prices continued through July with average electric price closing at \$42.13, approximately 6% higher (\$39.72/MWh) than budgeted.
- Fuel Prices
 - NYPA continues to manage fuel purchases to stay within budget.
 - July's natural gas prices were 8% below forecast, averaging \$3.24/mmbtu compared to forecast of \$3.53/mmbtu.

With respect to the Authority's performance, its consistent budgeted generation with the higher energy or electricity prices should ultimately ensure that it has strong performance through the end of the year and support President Quiniones' report that the Authority will meet its performance projections at the end of the year.

Economic Development

As part of its agreements, the Authority supports several economic development programs across the state.

The Recharge New York Program remains a strong statewide program with approximately 83% of the available power currently allocated to customers primarily in the manufacturing sector.

The economic development programs (Recharge NY, Western New York Hydropower and Preservation Power) continue to provide value to businesses throughout the state with more than 400,000 jobs and over \$34 billion in capital investments.

Customer

Customer Investments

In line with the Board's request for the Authority to accelerate its strategic initiatives, customer investments have increased \$47 million over budget year-to-date. This is due mainly to accelerating project construction schedules (50%), as well as new projects added to the pipeline (50%).

Non-utility Revenues

Non-utility revenue accruals are in line with customer investments. Year-to-date, Non-utility revenues are above budget (\$2.8M) trending with the Authority's accelerated project schedules. Going forward, through the remainder of the year, it is anticipated that Non-utility Revenues will show a more positive variance relative to the budget as the volume for projects in construction increases.

Operating Expenses

Operating expenses are still in line with the budget. Although the Authority is delivering higher customer projects, it is not increasing its operating expenses.

Installation of HVAC Unit

The Authority installed a new, high efficiency HVAC system on the top of MTAs Long Island Hillside maintenance facility. This project also includes LED lighting upgrade, as part of this overall capital project. Total cost of this project is \$8.8 million.

North Country Energy Storage Project

The North Country Energy Storage Project supports New York's REV in terms of ensuring that there is efficient integration of renewables into New York State by 2030, as well as provides examples for the market with respect to meeting the target that has been set for 1500 megawatts of energy storage by 2025.

With respect to NYPA's role in New York State's Energy Policy, the North Country Energy Storage Project will alleviate some of the bottleneck and congestion on the transmission system with the installation of a 20-megawatt Storage System. This project is expected to go into service in 2020. Staff will be requesting developmental funding of \$6 million and will come back to the Board for formal approval of the Project the beginning of next year.

1. Economic Development Allocations and Awards:

a. Annual Compliance Review – Expansion Power, Replacement Power and Preservation Power Hydropower Programs

The President and Chief Executive Officer submitted the following report:

SUMMARY

Authority Staff has conducted its annual compliance review of (1) customers with facilities in Western New York that receive hydropower under the Expansion Power ('EP') and Replacement Power ('RP') Programs; and (2) customers with facilities in Northern New York that receive Preservation Power ('PP') (collectively, 'Hydropower'), covering the reporting period of January 1, 2017 through December 31, 2017 (the 'Reporting Period'). The compliance review examined contract compliance in three areas: (1) job creation and retention (collectively, 'job retention'); (2) power utilization; and (3) capital investment. As provided for in each customer's contract with the Authority, these customers began submitting their compliance reports to the Authority in February 2018.

The purpose of this report is to inform the Trustees of the results of the compliance review for the Reporting Period. In addition, the Trustees are asked to authorize the reduction of hydropower allocations for certain customers who have failed to meet job retention, power utilization, and/or capital investment commitments, or a combination of these commitments. As detailed below, the underlying Hydropower contracts require customers to achieve at least a 90% compliance rate for each of the three commitment areas noted. At this time, Authority staff is recommending enforcement of the contract commitments for specific customers that have an allocation of greater than 100 kilowatts ('kW') of Hydropower who have failed to achieve at least a 90% compliance level for job retention commitments, power utilization commitments, capital investment commitments, or a combination of these commitments.

In summary:

- (1) The compliance level of each of the 3 Hydropower customers described in Exhibit '5d i-1a-A' fell below 90% of their power utilization commitment for the Reporting Period. Staff recommends that the Authority be authorized to adjust the job commitments for each such customer as indicated in Exhibit '5d i-1a-A'. Staff recommends that the Hydropower allocations and contract demands for each such customer be reduced to the amounts indicated in Exhibit '5d i-1a-A,' and that the Authority be authorized to adjust job commitments for these customers as indicated in Exhibit '5d i-1a-A' to reflect the reduced Hydropower allocations and contract demands.
- (2) The compliance level of the Hydropower customer described in Exhibit '5d i-1a-B' fell below 90% of its contractual capital investment commitment for the Reporting Period. Staff recommends that the Hydropower allocation and contract demand for this customer be reduced, and its job and capital investment commitments be adjusted to reflect the reduced Hydropower allocation and contract demand, to the amounts reflected in Exhibit '5d i-1a-B'.
- (3) The Compliance level of the 7 Hydropower customers described in Exhibit '5d i-1a-D' fell below 90% for one or more commitments for the Reporting Period. However, as described below and in Exhibit '5d i-1a-C,' due to a change in commitment performance, or because the applicable compliance methodology used to calculate potential reductions in contract demand and allocation does not result in a reduction, staff is not recommending compliance action as to these specific customers.
- (4) In addition to the foregoing, 2 Hydropower customers did not file a compliance report in violation of contract requirements. Pursuant to the request of these customers, their

allocations have been terminated. Accordingly, no compliance action by the Trustees is requested for these customers.

The tables provided in Exhibit '5d i-1a-D' provide a summary of all Hydropower customers discussed in greater detail in Exhibits '5d i-1a-A' through '5d i-1a-C.'

BACKGROUND

In addition to the basic requirement to pay for electric service, Hydropower contracts typically provide for several 'supplemental' commitments by the customer relating to (1) job retention, (2) power utilization, and/or (3) capital investment (collectively, 'Supplemental Commitments').

Each year Staff performs a review of all in-service Hydropower allocation contracts for compliance with Supplemental Commitments. In or around 2013, most RP and EP allocations began service under new contracts that were negotiated and approved by the Trustees in 2010, which require, among other commitments, annual capital investment commitments.

To facilitate compliance review and contract enforcement, nearly all Hydropower contracts require customers to report information on the Supplemental Commitments. Customers are required to report pertinent information no later than February 28 of each year for the prior 12-month reporting period from January through December.

As more specifically detailed in the Hydropower contracts, if a customer's report or other information indicates that any of its Supplemental Commitments for the reporting period is below a compliance rate of 90%, the Authority may take action against the customer, which may include reducing the customer's power allocation on a pro rata basis. Pro-rata reductions in allocations and contract demands are rounded up to the nearest 50 kilowatts.

Customers are given the opportunity to provide an explanation for a compliance shortfall during the Reporting Period. Accordingly, staff's analysis and the recommendations contained herein do not represent a 'black and white' analysis. Rather, staff has taken a 'big picture' approach that includes, where reasonable, appropriate consideration of individual or special circumstances affecting customers. Staff is also focusing more carefully on power utilization by Hydropower customers as compared to other compliance reviews. Authority Hydropower is a valuable asset. A customer's failure to make use of an allocation as provided for in the Hydropower contract can result in 'idle' Hydropower being unavailable for sale to other businesses that are willing to make job, capital investment and other commitments in exchange for the opportunity to receive Hydropower.

DISCUSSION

1. Background

Staff has completed its annual compliance review of all in-service WNY Hydropower allocation contracts for compliance with Supplemental Commitments.* In 2017, the Authority had 118 Hydropower customers who collectively were receiving a total of 211 Hydropower allocations under the RP, EP, and PP programs. Of these, a total of 109 customers holding 199 allocations were required to report compliance levels for 2017. Of this number, the Authority received reports from 107 customers covering 197 Hydropower allocations. The contracts reviewed by staff represent total power allocations of 767 megawatts and total employment commitments of 26,804 jobs. In the aggregate, these customers

* In addition to the annual compliance review, each year the Authority's Internal Audit group, with the assistance of an independent auditor retained by the Authority, randomly selects customers whose annual compliance report is reviewed for accuracy. This year, a job reporting audit and a capital investment spending audit was performed by an auditing firm. The audits are designed to help staff validate reported information. Audited customers receive feedback on the audit results, including guidance for future submittals.

reported actual employment of 41,435 jobs. This represents 155% of the total job commitment for Hydropower customers reporting in 2017.

In addition, the reported aggregate capital investment spending during the Reporting Period totaled \$403 million for commitments collectively totaling \$137 million. The results showed a majority of companies have met or exceeded a 90% compliance threshold for capital investments during this Reporting Period.

A total of 96 companies that were reviewed were found to be compliant with all three Supplemental Commitments. However, 11 companies were found not to be compliant for at least one Supplemental Commitment. The Authority did not receive compliance reporting data from 2 companies. The Authority terminated the allocations of these customers at their request effective March 31, 2018.

Based on the Hydropower contract, the applicable tariff, and the Authority's regulations, the Authority has a number of options available to respond to a customer that is in breach of contractual obligations, including, for example, termination of the contract, suspension of electric service, and reduction of the amount of a customer's Hydropower allocation and contract demand.

As noted, the underlying Hydropower contracts require customers to achieve at least a 90% compliance rate with respect to the three Supplemental Commitment areas noted. At this time, Staff is recommending enforcement of the contract commitments for several Hydropower customers who have failed to achieve at least a 90% compliance level for job retention commitments, power utilization commitments, capital investment commitments, or a combination of these commitments. Staff is also recommending that the Authority be authorized to adjust job commitments and/or capital investment commitments proportionately, as discussed below to reflect reduced Hydropower allocations and contract demands. Information relating to these customers is provided in Exhibits '5d i-1a-A' and '5d i-1a-B.'

For reasons discussed below in Section 3 and in Exhibit '5d i-1a-C,' staff is not recommending that formal compliance enforcement action be taken regarding the 7 Hydropower customers listed in Exhibit '5d i-1a-C' whose reported data indicate they failed to achieve at least a 90% compliance rate for the Supplemental Commitment indicated.

2. Failure to Meet Supplemental Commitments – Action Requested

This section discusses specific compliance information concerning the Supplemental Commitments described below.

a) Failure to Meet Power Utilization Commitments

A total of 3 customers who are identified in Exhibit '5d i-1a-A' fell below a 90% compliance rate for their Supplemental Commitment for power utilization.

Staff recommends that the Trustees approve reductions in the Hydropower allocations and contract demands for these 3 customers to the amounts indicated in Exhibit '5d i-1a-A.' In addition, Staff recommends that the Trustees authorize the Authority to make adjustments to the job commitments for these customers to the amounts indicated in Exhibit '5d i-1a-A' to reflect the reductions in the Hydropower allocations.

b) Failure to Meet Capital Investment Commitments

The compliance review showed that the business identified in Exhibit '5d i-1a-B' failed to achieve at least a 90% compliance rate for its capital investment commitment. Staff recommends that the Trustees approve reductions in the Hydropower allocations and contract demands for this customer to the amounts indicated in Exhibit '5d i-1a-B.' In addition, staff recommends that the Trustees authorize the

Authority to make adjustments to the capital investment and job commitments for this customer to the amounts indicated in Exhibit '5d i-1a-B' to reflect the reductions in the customer's Hydropower allocation.

3. Failure to Meet Supplemental Commitments – No Action Requested

The 7 customers described in Exhibit '5d i-1a-C' reported data indicating that they did not achieve at least a 90% compliance rate for one or more Supplemental Commitments. For the reasons discussed below, staff is not recommending compliance action with respect to these customers at this time. Where appropriate, staff will continue to monitor the commitment performance of these customers and may return to the Trustees at a later date with recommendations for compliance action regarding one or more of these customers.

i) Job Retention

Reporting data for the 4 customers listed in Exhibit '5d i-1a-C,' Section 1, indicates that these customers fell below the 90% compliance threshold for job retention. However, compliance action is not requested for these customers. As indicated in Exhibit '5d i-1a-C,' in the case of three of these customers, application of the methodology that the Authority uses to calculate potential reductions to allocations/contract demand does not result in a reduction. In the remaining case, the customer has supplied the Authority with information indicating that its job counts are increasing and currently exceed the customer's employment commitment.

ii) Power Utilization

Compliance reporting indicated that the 2 companies listed in Section 2 of Exhibit '5d i-1a-C' were underutilizing their Hydropower allocations on average over the Reporting Period, and as a result fell below a 90% compliance rate for power usage. As indicated in Exhibit '5d i-1a-C', in each case the customer supplied the Authority with more recent information which indicates an increase in power utilization. Consequently, staff is not recommending compliance action for these customers at this time.

iii) Capital Investment and Job Retention

Compliance reporting for the company listed on Exhibit '5d i-1a-C,' Section 3 indicates that the company failed to meet its capital investment and job retention commitments. However, at the customer's request, the Authority will be terminating this customer's allocation. Accordingly, formal compliance action for this customer is unnecessary.

RECOMMENDATION

The Vice President - Economic Development recommends that the Trustees:

- (1) authorize a reduction of the Hydropower allocations and contract demands for the 3 Hydropower customers identified in Exhibit '5d i-1a-A' to the amounts indicated in Exhibit '5d i-1a-A,' and authorize the Authority to adjust job commitments for these customers as indicated in Exhibit '5d i-1a-A'; and
- (2) authorize a reduction of the Hydropower allocation and contract demand for the company identified in Exhibit '5d i-1a-B,' to the amount indicated in Exhibit '5d i-1a-B,' and authorize the Authority to adjust the job commitment and capital investment commitment for this customer to the amounts indicated in Exhibit '5d i-1a-B.'

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Trustees hereby accept the recommendations regarding the annual compliance review for the Expansion Power, Replacement Power, and/or Preservation Power (collectively, "Hydropower") programs for the compliance period January 1, 2017 through December 31, 2017; and be it further

RESOLVED, That the Trustees hereby approve the reduction of Hydropower allocations and contract demands for the customers identified in Exhibit "5d i-1a-A" to the amounts indicated therein, and authorize the Authority to adjust job commitments for these customers as indicated in Exhibit "5d i-1a-A," for the reasons described in Exhibit "5d i-1a-A" and the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Trustees hereby approve the reduction of Hydropower allocation and contract demand for the customer identified in Exhibit "5d i-1a-B" to the amount indicated therein, and authorize the Authority to adjust this customer's job and capital investment commitments as indicated in Exhibit "5d i-1a-B," for the reasons described in Exhibit "5d i-1a-B" and the foregoing report of the President and Chief Executive Officer; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things and take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

b. Proposed Extension of Recharge New York Power Allocations

The President and Chief Executive Officer submitted the following report:

"SUMMARY"

The Trustees are requested to:

1. Approve the revised form of contract that is attached hereto as Exhibit '5d i-1b-A' ('Revised Contract Form'), and determine that the Revised Contract Form, in a final form substantially similar to that attached as Exhibit '5d i-1b-A,' with existing Authority Service Tariff No. RNY-1 ('ST RNY-1'), shall apply to: (1) the sale of RNY Power allocations that are extended on or after this date; and (b) the sale off RNY Power allocations that are awarded by the Trustees on or after this date.
2. Authorize the extension of each of the existing 180 allocations of Recharge New York ('RNY') Power ('Allocation' or collectively 'Allocations') awarded to the businesses listed in Exhibit '5d i-1b-B' for a term of seven (7) years, to commence (a) on the expiration of each such Allocation, or (b) in the Authority's discretion, on a date to be agreed upon by the Authority and the customer for a term not to exceed 7 years (collectively, the 'Extended Term'), subject to the following conditions:
 - (a) The sale of any Allocation extended as proposed herein shall be governed by the Revised Contract Form and ST RNY-1.
 - (b) A customer whose Allocation would be extended would have to agree to provide supplemental commitments for, among other things, jobs and capital investments, as it has in its current RNY agreement(s) with the Authority (collectively, 'Current RNY Power Agreement') for the length of any Extended Term, through the incorporation of such supplemental commitments in the proposed final Revised Contract Form that is executed by the parties. With respect to capital investments, the vast majority of RNY Power customers (i.e., those who do not have project/expansion capital investment commitments) would be expected to meet a minimum capital investment commitment which may be satisfied through capital expenditures made over a five-year period.
 - (c) The customer is in compliance with its contractual obligations to the Authority under its Current RNY Power Agreement.

As discussed below, the Economic Development Power Allocation Board, at their meeting held on September 26, 2018, recommended to the Trustees that each of the Allocations listed on Exhibit '5d i-1b-B' be extended for 7 years as described above.

BACKGROUND

On April 14, 2011, Governor Andrew M. Cuomo signed into law the RNY Power Program as part of Chapter 60 (Part CC) of the Laws of 2011. The RNY Power Program is codified primarily in Economic Development Law ('EDL') §188-a and Public Authorities Law ('PAL') §1005(13-a) (the 'Statutes'). The program makes available 910 megawatts ('MW') of 'RNY Power,' 50% of which will be provided by the Authority's resources and 50% of which will be procured by the Authority from other sources. RNY Power contracts can be for a term of up to seven years in exchange for job and capital investment commitments. RNY Power is available to businesses and not-for-profit corporations for job retention and business expansion and attraction.

'Eligible applicant' is defined by statute to mean an eligible business, eligible small business, or eligible not-for-profit corporation; however, an eligible applicant shall not include retail businesses as

defined by EDPAB, including, without limitation, sports venues, gaming or entertainment-related establishments or places of overnight accommodations.

RNY Power allocation awards are comprised of 50% hydropower and 50% Authority-procured market power. Prior to entering into a contract with an eligible applicant for the sale of RNY power, and prior to the provision of electric service relating to the RNY power allocation, the Authority shall offer each eligible applicant the option to decline to purchase the RNY market power component of such allocation. If an eligible applicant declines to purchase the RNY market power component, the Authority has no responsibility for supplying such market power to the eligible applicant.

Under applicable law, applications for RNY Power are first considered by EDPAB. EDPAB is authorized to recommend applicants to the Authority's Trustees that it believes should receive an award of RNY Power based on applicable statutory criteria and other pertinent considerations. The statutory criteria are listed in Exhibit '5d i-1b-C' to this report. An allocation recommended by EDPAB qualifies the subject applicant to enter into a contract with the Authority for the purchase of the RNY Power if the Authority makes an allocation award.

Currently, there are 743 customers who have been awarded a collective total of 829 Allocations of RNY Power. Of this number, 422 RNY Power allocations are scheduled to expire in 2019 and 199 are scheduled to expire on June 30, 2019. These customers were among the RNY Power applicants to receive RNY Power applications at the inception of the RNY Power program in 2012.

DISCUSSION

1. Revised Contract Form

Staff has developed a revised contract form for the sale of RNY. Copies of the Revised Contract Form, and ST RNY-1, are attached to this memorandum as Exhibit '5d i-1b-A.' A summary of the provisions of the Revised Contract Form is provided below in the context of the overall discussion of the proposed terms and conditions that are being proposed for the extension of the RNY power Allocations identified in Exhibit '5d i-1b-B.'

Relatedly, the Authority has been taking actions to administer its power supply programs in a manner that, in its judgment, is consistent with the State Energy Plan ('SEP'), and the Clean Energy Standard ('CES') and Renewable Energy Standard ('RES') established by the Public Service Commission ('PSC'). For example, on January 31, 2017, the Trustees authorized the Authority to voluntarily participate in the Zero Emission Credit ('ZEC') initiative created by the PSC with respect to the share of the State's load that the Authority serves through its power supply programs, and enter into a contract with the New York Energy Research and Development Authority to purchase ZECs for such purpose. In addition, the Authority has, with prior Trustee authorization, included cost recovery provisions for the Authority's compliance with the ZEC/Tier III Requirement and for RES/Tier I compliance in new power supply agreements issued under the RNY Power program, and hydropower programs such as EP, RP and Preservation Power, beginning in October 2016 and June 2017, respectively.

In other business before the Board today, staff has requested the Trustees to provide the Authority with further authorization to address these important State energy policies, which includes authority to design and implement comprehensive compliance programs for the purpose of implementing the Authority's power supply programs, including the RNY Power program, in a manner that the Authority determines to be consistent with the policies and long-range energy planning objectives and strategies contained in the SEP and CES. Under such programs, the Authority's power sale agreements would provide for: (1) the application of a ZEC purchase requirement to the end-user load that the Authority serves under its power supply programs as load serving entity ('LSE'), and a ZEC-related charge to the customer that is intended to recover costs that the Authority incurs for purchasing ZECs in quantities that are attributable to the individual customer's load served by the Authority under a power sale agreement; and (2) the Authority's procurement of Renewable Energy Credits ('RECs') through means determined by

the Authority in quantities that are intended to correspond to the annual 'mandatory minimum percentage proportions' established by the PSC as applied to the load that the Authority as LSE serves in a given calendar year, and a RES/REC-related charge to the customer that is intended to recover costs that the Authority incurs for purchasing RECs in quantities that are attributable to the individual customer's load served by the Authority under a power sale agreement.

A description of the compliance program as it would be applicable to the RNY Power program, and the applicable methodologies that were developed as part of the compliance programs for RNY Power is provided in Schedule D (entitled, 'Zero Emission Credit Charge') and Schedule E (entitled, 'Monthly Renewable Energy Credit Charge') of the Revised Contract Form. Although earlier versions of some RNY Power sale agreements contained provisions for cost recovery related to ZEC and RES/REC compliance, the provisions contained in the Revised Contract Form have been further developed based on, among other things, the Authority's experience with SEP and CES-related requirements, the renewable energy market, possible compliance approaches for the Authority's power supply programs, discussions with Authority customers, and consideration of the Authority's own mission.

Staff recommends that the Trustees approve the Revised Contract Form which, in a final form substantially similar to that attached as Exhibit '5d i-1b-A,' along with existing Authority Service Tariff ST RNY-1, would be applicable to: (1) the sale of RNY Power allocations that are extended on or after this date; and (2) the sale off RNY Power allocations that are awarded by the Trustees after this date.[†]

2. Extension of Existing Allocations

To date, the Authority has reviewed applications from 180 RNY Power customers who have filed applications requesting that their existing RNY Power allocations be extended. Staff has analyzed the applications of the RNY Power customers listed on Exhibit '5d i-1b-B' and a copy of each application has been made available to the Board. Staff's review has included on a customer-specific basis consideration of such issues as the amount of each Allocation that would be extended, the supplemental commitments that these customers have made under their Current RNY Power Agreement and are prepared to make as consideration for an extension, and the customer's compliance status under its Current RNY Power Agreement, including its compliance with supplemental commitments for jobs and capital investments.

The businesses listed on Exhibit '5d i-1b-B' which are located throughout the State bring valuable benefits to the State. In total, the Allocations listed in Exhibit '5d i-1b-B' are supporting the retention of some 60,197 jobs and over \$1.7 billion in capital investments throughout New York State, and the Authority will require customers to commit to the same or substantially similar supplemental commitments for jobs and capital investments that are summarized in Exhibit '5d i-1b-B' for the Extended Term.

At its meeting held on September 26, 2018, EDPAB recommended to the Trustees that each of the Allocations listed on Exhibit '5d i-1b-B' be extended for 7 years as described above. As part of its recommendation that these Allocations be extended, EDPAB, consistent with provisions contained in the applicable Statutes, also recommended that the contract for the sale of the Allocations contain:

- (1) provisions for effective periodic audits of the recipient of an allocation for the purpose of determining contract and program compliance, and for the partial or complete withdrawal of an allocation if the recipient fails to maintain commitments, relating to such things as employment levels, power utilization, capital investments, and/or energy efficiency measures;
- (2) requirements for an agreement by the recipient of an allocation undertake at its own expense an energy audit of its facilities at which the allocation is consumed modified by the Authority

[†] The Revised Contract Form will need to be populated with customer-specific information, including the customer's supplemental commitments. This exercise and the task of finalizing the Revised Contract Form and preparing it for execution, may necessitate other modification to the Revised Contract Form. Staff expects that the final, execution version of the Revised Contract Form will be substantially similar to the form attached as Exhibit '5d i-1b-A.'

on a showing of good cause by the recipient, and that the recipient provide the Authority with a copy of any such audit or a report describing the results of such audit;

- (3) a requirement for an agreement by the recipient of an allocation to make its facilities available at reasonable times and intervals for energy audits and related assessments that the Authority desires to perform; and
- (4) a recommendation shall require that if the actual metered load at the facility where the allocation is utilized is less than the allocation, such allocation will be reduced accordingly.

Staff believes that an extension of each Allocation listed on Exhibit '5d i-1b-B' is appropriate and is consistent with the statutory criteria that are used to evaluate applications for an award of RNY Power which are listed in Exhibit '5d i-1b-C.' The following is a summary of the terms and conditions that would be apply to the sale of the RNY Power Allocations if the Allocations are extended, as recommended:

- The RNY Power Allocations listed on Exhibit '5d i-1b-B' would be extended by seven (7) years to begin upon the expiration of the Allocation. Alternatively, customers would be offered the opportunity to take electric service under the Revised Contract Form prior to the scheduled expiration of their current Allocation for a new term not to exceed 7 years. This latter approach would accommodate customers who desire to secure a new seven-year term and begin electric service under the Revised Contract Form in advance of the scheduled expiration of their Allocation.
- Each customer listed on Exhibit '5d i-1b-B' has made supplemental commitments relating to job creation/retention, capital investment and power utilization in its Current RNY Power Agreement and, again, proposes to make supplemental commitments as consideration for an extension of its Allocation. These supplemental commitments are summarized in general terms in Exhibit '5d i-1b-B.' As a condition to receiving an extension through one of the approaches discussed above, the customer would have to agree to provide the same or substantially similar supplemental commitments for jobs and capital investments for the Extended Term. With respect to capital investments, the vast majority of RNY Power customers (i.e., those who do not have existing project/expansion capital investment commitments) would be expected to meet a minimum capital investment commitment which may be satisfied through capital expenditures made over a five-year period.
- The sale of the Extended Allocation would be made pursuant to the Revised Contract Form. The Authority's Tariff that currently applies to the sale of RNY Power, ST RNY-1, would continue to apply to the sale of Allocations, as extended.
- Customers would continue to have an obligation to perform an energy audit at the facility that receives the RNY Power Allocation during the Extended Term. However, under the Revised Contract Form, customers would have the option to satisfy the audit requirement through either a traditional physical audit or a virtual audit using the Authority's New York Energy Manager ('NYEM'). The NYEM option is expected to result in considerable cost savings for customers who select the NYEM option.
- The Authority will periodically communicate with the customer about energy-related projects, programs and services offered by the Authority.
- Consistent with EDPAB's recommendation, the Revised Contract Form contains would contain provisions addressing such matters as effective periodic audits of the customer for the purpose of determining contract and program compliance, including supplemental commitments for jobs, capital investment and power utilization, and the partial or complete withdrawal of an RNY Power if the customer fails to maintain mutually agreed upon commitments relating to among other things the aforementioned supplemental commitments. In addition, the Revised Contract Form

will require that the customer perform an energy efficiency audit at its facility and provide access to the facility at the Authority's request.

- The Revised Contract Form contains enhanced provisions to address the parties' rights and obligations relating to power allocations that are provided to support new or expanded facilities.
- The Revised Contract Form incorporates a more developed approach by the Authority to administering the RNY Power program in a manner that the Authority determines is consistent with the State Energy Plan and Clean Energy Standard (as discussed above), and includes provisions for recovery of the Authority's costs for actions that the Authority undertakes for these purposes.

Based on the foregoing discussion, staff recommends that the Trustees extend the Allocations listed on Exhibit '5d i-1b-B' subject to the following conditions:

- (a) The sale of Allocations extended as proposed is governed by the Revised Contract Form in a final form substantially similar to that attached to this memorandum as 'Exhibit '5d i-1b-A,' and existing ST RNY-1.
- (b) In order to receive an extension of its Allocation, the customer must agree, for the Extended Term, to provide the supplemental commitments for jobs and capital investments that are the same or substantially similar to those that are summarized generally in Exhibit '5d i-1b-B,' through the incorporation of such supplemental commitments in the final Revised Contract Form that is executed by the parties. With respect to capital investments, RNY Power customers who do not have current project/expansion capital investment commitments would be expected to meet a minimum capital investment commitment which may be satisfied through capital expenditures made over a five-year period.
- (c) The customer is in compliance with its contractual obligations to the Authority under its Current RNY Power Agreement.

RECOMMENDATION

The Vice President - Economic Development recommends that the Trustees:

1. Approve the Revised Contract Form that is attached hereto at Exhibit '5d i-1b-A' subject to finalization as described herein, and determine that the Revised Contract Form, in a final form that is substantially similar to that attached as Exhibit '5d i-1b-A,' along with Authority Tariff ST No. RNY-1, shall apply to: (1) the sale of RNY Power allocations that are extended on or after this date; and (b) the sale of RNY Power allocations that are awarded by the Trustees after this date.
2. Accept the recommendations of EDPAB, and authorize the extension of each of the existing 180 Allocations of RNY Power for the customers listed on Exhibit '5d i-1b-B' for a term of seven (7) years to commence on the expiration of the Allocation, or commencing on a date to be agreed upon by the parties for a term not to exceed 7 years, subject to the following conditions:
 - (a) The sale of Allocations extended as proposed in this memorandum will be governed by the Revised Contract Form as described above and ST RNY-1.
 - (b) In order to receive an extension of its Allocation, the customer must agree, for the Extended Term, to provide supplemental commitments for jobs and capital investment that are the same or substantially similar to those that are summarized in Exhibit '5d i-1b-B,, through the incorporation of such supplemental commitments in the final Revised Contract Form that is executed by the parties. With respect to capital investments, RNY Power customers who do not have ongoing project/expansion capital investment commitments would be required to

meet a minimum capital investment commitment which may be satisfied through capital expenditures made over a five-year period.

- (c) The customer is in compliance with its contractual obligations to the Authority under its Current RNY Power Agreement.

For the reasons stated, I recommend the approval of the above-requested action by adoption the resolution below.”

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Trustees hereby approve the revised form of contract attached to the foregoing report of the President and Chief Executive Officer (“Report”) as Exhibit “5d i-1b-A,” subject to such modifications as the Vice President, Economic Development determines are necessary and appropriate in order to finalize such contract for execution in a manner that is consistent with this Resolution and the goals of the RNY Power program (the “Revised Contract Form”); and be it further

RESOLVED, That the Revised Contract Form and Authority Service Tariff No. RNY-1 (“ST RNY-1”) shall apply to: (1) the sale of any existing Recharge New York (“RNY”) Power allocations that are extended on or after this date; and (2) the sale of RNY Power allocations that are awarded on or after this date; and be it further

RESOLVED, That the Trustees hereby accept the recommendations of the Economic Development Power Allocation Board and approve the extension of each of the existing 180 RNY Power allocations (“Allocation” or collectively “Allocations”) previously awarded to the customers listed in Exhibit “5d i-1b-B” for a term of seven (7) years, to commence on (1) the expiration of the term of the Allocation, or (2) in the Authority’s discretion, commencing on a date to be agreed upon by the Authority and the customer for a term not to exceed 7 years (collectively, the “Extended Term”), subject to the following conditions:

- (a) the sale of the Allocations as extended hereunder shall be made under the Revised Contract Form and ST RNY-1;**
- (b) in order to receive an extension of its Allocation, the customer agrees to provide the supplemental commitments for jobs, capital investment and power utilization that are the same or determined by the Authority to be substantially similar to those contained in Exhibit “5d i-1b-B” for the Extended Term, through the incorporation of such supplemental commitments in the final Revised Contract Form that is executed by the parties, and RNY Power customers who do not have an**

ongoing project/expansion capital investment commitment shall meet a minimum capital investment commitment which may be satisfied through capital expenditures made over a five-year period; and

- (c) that customer is in compliance with its contractual obligations to the Authority under its current RNY Power agreement(s) with the Authority; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

**c. Proposed Extension of WNY Hydropower Allocations;
Further Authorization Related to Compliance with
State Energy Plan and Related State Energy Standards**

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to:

1. Authorize a public hearing, in accordance with Public Authorities Law ('PAL') §1009, on a proposed form of contract ('Proposed Extension Contract') that would, along with a new Authority service tariff designated as Service Tariff No. WNY-2 ('ST WNY-2'), apply to the sale of Replacement Power ('RP') and Expansion Power ('EP') ('WNY Hydropower') allocations that are being proposed for extension subject to the conditions discussed below. Copies of the Proposed Extension Contract and ST No. WNY-2 are attached as Exhibit '5d i-1c-A.'
2. Approve an extension of the term of each of the existing WNY Hydropower allocations identified in Exhibits '5d i-1c-B' and '5d i-1c-C' ('Allocation' or collectively 'Allocations') through December 31, 2028 (the 'Extended Term'), subject to the following conditions:
 - (d) that the sale of Allocations extended as proposed herein (hereinafter, 'Extended Allocations') is governed by ST WNY-2 and Proposed Extension Contract that is presented to the customer in final form following the conclusion of the public hearing and approval process provided for in PAL §1009;
 - (e) that the customer agrees, for the Extended Term, to the same or substantially similar supplemental commitments for jobs and capital investments that are contained in its current WNY Hydropower agreement(s) with the Authority (collectively, 'Current WNY Hydropower Agreement'), through the incorporation of such supplemental commitments into the final Proposed Extension Contract that is executed by the customer;
 - (f) that, in the case of a customer whose existing supplemental commitments do not include an annual capital investment commitment, such customer agree to an annual capital investment commitment for the Extended Term that Authority staff determines to be appropriate based on the customer's circumstances; and
 - (g) the Customer is in compliance with its supplemental commitments for jobs and capital investments under its Current WNY Hydropower Agreement.
3. Authorize the Authority to take further actions to establish and implement comprehensive compliance programs for each of the power supply programs for which the Authority serves as load serving entity, including the WNY Hydropower programs, for the purpose of implementing the Authority's power supply programs, including the EP, RP, Preservation Power, RNY Power, and the Authority's governmental power supply programs, in a manner that the Authority determines to be consistent with the policies and long-term planning objectives of the State Energy Plan and the State's Clean Energy Standard. As detailed below, the compliance programs would authorize the Authority to implement Zero Emission Credit and Renewable Energy Credit purchase programs for the load that the Authority serves under its power supply programs, and recover its costs from customers who purchase power under these programs. The specific programs that would apply to the EP and RP Programs are set forth in Schedules D and E of the Proposed Extension Contract that is attached as Exhibit '5d i-1c-A.'

DISCUSSION

1. Background

Under PAL §1005(13), the Authority may allocate and sell directly or by sale for resale, 250 MW of EP and up to 445 MW of RP ('WNY Hydropower') to businesses located within 30 miles of the Niagara Power Project, provided that the amount of EP allocated to businesses in Chautauqua County on January 1, 1987 shall continue to be allocated in such county.

In the 2009-10 time period, the Authority implemented a practice that encouraged WNY Hydropower customers to begin discussions with the Authority about the extension of WNY Hydropower allocations well in advance of the expiration of such allocations. The practice is intended to give businesses that purchase WNY Hydropower increased certainty about the long-term supply of WNY Hydropower, thereby supporting and encouraging long-term planning and investment in Western New York-based facilities through employment and capital investment. The process was well received and was formalized in the Authority's WNY Hydropower contracts.

Currently, there are 116 customers who have been awarded a collective total of 219 Allocations of EP and/or RP from the Authority. Exhibit '5d i-1c-B' lists the Allocations that are currently in service. Exhibit '5d i-1c-C' lists Allocations that have been awarded but not yet accessed by the awardee due to the pendency of an expansion project or other circumstances. The Allocations on Schedule '5d i-1c-B' are scheduled to expire on various dates through April 30, 2025,[‡] although the majority (148) is scheduled to expire on June 30, 2020.

2. Proposed Extension Offer

In accordance with the early outreach process described above, in late 2015, a representative group of WNY Hydropower customers asked the Authority to begin discussions on long-term extensions of existing WNY Hydropower allocations. These customers and Authority staff conferred over the course of the last two years to discuss possible terms and conditions for the extension of the Allocations.

These discussions have culminated in the development of a proposal by staff on behalf of the Authority that would provide a long-term extension of the Allocations and secure long-term commitments by the businesses to continue to make long-term investments in Western New York, as identified in Exhibit '5d i-1c-B.' The offer would also be made available to the businesses identified in Exhibit '5d i-1c-C' which are not yet under contract due to the pendency of an expansion project or other circumstances. The extension proposal may be summarized as follows:

- The Allocations listed on Exhibits '5d i-1c-B' and '5d i-1c-C' would be extended through December 31, 2028 (i.e., the Extended Term). Assuming that the sale of the Extended Allocations begins on or about January 1, 2019, this would represent an effective term of approximately 10 years for most WNY Hydropower customers, providing these customers with long-term certainty about the supply of WNY Hydropower and securing long-term economic benefits for Western New York.
- Each of the customers listed on Exhibit '5d i-1c-B' have agreed in their Current WNY Hydropower Agreement to supplemental commitments for job creation/retention, capital investment and power utilization commitments that are detailed in Exhibit '5d i-1c-B.' In exchange for an extension of its Allocation, the customer would have to agree to provide the same or substantially similar supplemental commitments for the Extended Term. For example, a customer that has an annual capital investment requirement in its Current WNY Hydropower Agreement would continue to

[‡] Two WNY Hydropower Customers with in service Allocations listed on the Exhibits, General Motors LLC and Steuben Foods Incorporated, each currently have longer term Allocations scheduled to expire on June 30, 2028.

commit to investing at least 90% of historic average capital spending each year for the term of the Extended Allocation, thus ensuring that the customers are investing in their facilities. Customers with specific project investment commitments that would extend into the Extended Term would continue to commit to make the capital investments associated with their expansion project.

- Approximately 17 customers listed on Exhibit '5d i-1c-B' were not obligated under their Current WNY Hydropower Agreement to make an annual capital investment commitment. Most of these customers committed to a one-time expansion-based capital investment which is now completed. For the purpose of securing a reasonable capital investment commitment in exchange for an Allocation extension, staff is seeking authority from the Trustees to negotiate an annual capital investment commitment from these customers that would apply to the Extended Allocation.
- Each business listed in Exhibit '5d i-1c-C' has agreed to provide supplemental commitments in exchange for its Allocation. Although these businesses have not yet executed a power sale contract with the Authority, the Authority would also offer to provide electric service to these businesses under Proposed Extension Contract and ST WNY-2.
- ST WNY-2 provides for a minimum monthly charge which helps the Authority cover fixed costs of serving a customer even when the customer does not utilize the allocation in a billing period. The Authority would waive the minimum monthly charge for up to one year if a Customer that can satisfactorily demonstrate a short-term reduction or interruption of facility operations due to events outside of the Customer's control. This provision would give flexibility to customers who experience short-term operational hardships allowing them to avoid costs when they are not fully able to utilize the power allocation without permanently relinquishing a portion of it.
- The base rates for demand and energy would be reduced by 4.0% commencing January 1, 2019. The reduction is taken off the currently effective 2018 rates contained in Service Tariff No. WNY-1 ('ST WNY-1'), the existing service tariff applicable to EP and RP allocations.
- The annual adjustment factor ('AAF') would be reduced by 50% when applied to determine the effective rate for the 2019 rate year (July 1, 2019-June 30, 2020). Thereafter, the AAF would be applied in full. This feature compliments the determination by the Authority to waive the application of the AAF authorized by the current tariff (Service Tariff WNY-1), for the 2018 rate year (July 1, 2018-June 30, 2019).
- The Proposed Extension Contract clarifies the Authority's obligations to supply 'substitute energy' in the event of 'adverse water conditions' that impacts power project operations, and now gives the customer the option to procure its own substitute energy pursuant to a process specified by the Proposed Extension Contract.
- The Authority would continue to provide unforced capacity to meet a Customer's New York Independent System Operator requirements associated with its Extended Allocation, and the customer would pay for this capacity.
- The Proposed Extension Contract contains updated provisions to address a number of matters, including customer metering arrangements, delivery of EP and RP by local electric utilities, the provision of substitute energy in the event of hydropower curtailments caused by adverse water conditions, and early outreach concerning future allocation extensions.
- Customers would be required to perform an energy audit at the facility receiving its WNY Hydropower allocation at least twice during the term of the Allocation. However, customers would have the option to satisfy the audit requirement through either a traditional physical audit, or a virtual audit using the Authority's New York Energy Manager ('NYEM'). The NYEM audit option is expected to provide considerable savings for customers who select it.

- The Proposed Extension Contract contains new provisions to clarify the parties' rights regarding the takedown of allocations that are awarded to support new or expanded facilities.
- The Authority has agreed to periodically communicate with the customer about energy-related projects, programs and services offered by the Authority.
- The Proposed Extension Contract continues to include compliance provisions that allow the Authority to reduce the WNY Hydropower allocations for a Customer's failure to meet supplemental commitments. The Proposed Extension Contract now gives the customer an opportunity to present a proposed plan with actionable milestones to cure deficiencies.
- As discussed in detail below, the Proposed Extension Contract incorporates a more developed approach by the Authority to administering the WNY Hydropower programs in a manner that is consistent with the State Energy Plan and Clean Energy Standard.

Staff has reviewed the pertinent circumstances of the customers listed on Exhibit '5d i-1c-B'. This review included consideration of three issues: (1) the amount of the Allocations that would be extended as part of the Authority's extension offer; (2) the supplemental commitments that would be provided in exchange for the extension; and (3) the compliance status of each customer under its Current WNY Hydropower Agreement.

Staff's review concluded that the customers represent a diverse cross section of businesses that bring valuable benefits to the State in consideration for their respective WNY Hydropower Allocations. In total, the Allocations identified in Exhibit '5d i-1c-B' have supported the creation/retention of approximately 30,100 jobs and over \$136 million in annual capital investments in Western New York.

Staff has been communicating with customers about the proposed extension offer, subject to Trustee approval and completion of statutory review and approval requirements. Staff expects that most, if not all, of the Customers will indicate by year's end that they intend to accept the extension offer. Authority staff will continue to engage with customers over the course of the next couple of months to discuss and respond to inquiries about the proposed extension offer.

Accordingly, staff recommends that the 219 Allocations listed on Exhibit '5d i-1c-B' and '5d i-1c-C' comprised of 90 EP allocations totaling 183,840 kilowatts ('kW') and 129 RP allocations totaling 345,909 kW, held by the customers identified on Exhibit '5d i-1c-B' be extended through December 31, 2028, subject to the following conditions:

- a. that the sale of the Extended Allocations will be governed by ST WNY-2 and Proposed Extension Contract that is presented to the customer in final form following the conclusion of the public hearing and approval process provided for in PAL §1009;
- b. that the customer agrees, for the Extended Term, to the same or substantially similar supplemental commitments for jobs and capital investments that are contained in its Current WNY Hydropower Agreement, through the incorporation of such supplemental commitments into the final Proposed Extension Contract that is executed by the customer;
- c. that, in the case of a WNY Hydropower customer whose existing supplemental commitments do not include an annual capital investment commitment, such customer agree to an annual capital investment commitment for the Extended Term that Authority staff determines to be appropriate based on the customer's circumstances; and
- d. that the customer is in compliance with its supplemental commitments for jobs and capital investments under its Current WNY Hydropower Agreement.

Under PAL §1009, when the Authority believes it has reached agreement with a proposed co-party on a contract for the sale of Authority-generated power, it will transmit the proposed form of the contract to the Governor and other elected officials, and hold a public hearing on the contract. At least 30-days' notice of the hearing must be given by publication once in each week during such period in each of six selected newspapers. At the conclusion of the public hearing, staff reports back to the Trustees on the hearing and any recommended changes to the contract. Upon approval of the final proposed contract by the Authority, the Authority must 'report' the proposed contract, along with its recommendations and the public hearing record, to the Governor and other elected officials. Upon approval by the Governor, the Authority is authorized to execute the contract.

Accordingly, staff further recommends that the Trustees authorize a public hearing, in accordance with PAL§ 1009, on the Proposed Extension Contract that would, along with Service Tariff No. WNY-2, apply to the sale of the Extended Allocations.

3. State Energy Plan and Clean Energy Standard Compliance

In an order issued on August 1, 2016 (the 'CES Order'), the New York Public Service Commission ('PSC') adopted a Clean Energy Standard ('CES') for the State. The CES is intended to implement the clean energy goals of the State Energy Plan ('SEP'), including that 50% of New York's electricity is to be generated by renewable energy sources such as wind and solar by 2030 (the '50x30 Goal'). The CES is comprised of a series of actions to achieve the SEP's goals, including two obligations that the CES Order imposes on load serving entities that the PSC regulates ('LSEs') in order to achieve the SEP's goals: (1) a Zero Emissions Credit ('ZEC') requirement; and (2) a Renewable Energy Standard ('RES') requirement.

The ZEC requirement consists of a 'Tier III' obligation on LSEs that the PSC regulates to purchase ZECs from the New York State Energy Research and Development Authority ('NYSERDA') in an amount corresponding to each LSE's proportional share of electric load it serves in relation to the total electric load served by all LSEs in the New York Control area, to support the preservation of existing at risk nuclear zero emissions attributes ('ZEC/Tier III Requirement'). The RES consists of, among other things, a 'Tier I' obligation on LSEs to invest in new renewable generation resources to serve retail customers by procuring qualifying Renewable Energy Credits ('RECs') in quantities that satisfy annual mandatory minimum percentage proportions of the total retail load an LSE serves ('RES/Tier I Requirement'). The CES Order also authorizes LSEs to recover the costs they incur for implementing the ZEC/Tier III Requirement and RES/Tier I Requirement from the customers that the LSEs serve.

The Authority is not subject to the jurisdiction of the PSC for purposes of the CES Order. The Authority does, however, supply electricity to end use customers in the State in a manner similar to a jurisdictional LSE. Moreover, Section 6-104(5) of the State's Energy Law provides that the State Energy Plan 'shall provide guidance for energy-related decisions to be made by the public ...sector[] within the state,' and '[a]ny energy-related action or decision of a state . . . authority shall be reasonably consistent with the . . . policies and long-range energy planning objectives and strategies contained in the State Energy Plan.'

Based on these considerations, the Authority has taken actions to administer its power supply programs in a manner that is consistent with the SEP and CES. For example, on January 31, 2017, the Trustees authorized the Authority to (i) voluntarily participate in the ZEC initiative created by the PSC in the CES Order with respect to the share of the State load that the Authority it serves through its power supply programs, and (ii) enter into a contract with the New York Energy Research and Development Authority ('NYSERDA') to purchase ZECs for such purpose. In addition, the Authority has, with Trustee approval, included cost recovery provisions for the Authority's compliance with the ZEC/Tier III Requirement and for RES/Tier I compliance in new power supply agreements issued under the Recharge New York ('RNY') Power program, and other hydropower programs such as EP, RP and Preservation Power, beginning in October 2016 and June 2017, respectively.

Staff is now requesting that the Trustees provide the Authority with additional authorization to design and implement comprehensive compliance programs for the purpose of implementing the Authority's power supply programs, including the RNY, EP, RP, Preservation Power programs, and the Authority's governmental power supply programs, in a manner that the Authority determines to be consistent with the policies and long-range energy planning objectives and strategies contained in the SEP and the CES. This authorization would include the following actions:

- For the purpose of implementing its power supply programs in a manner that the Authority determines to be consistent with the SEP and CES, including the ZEC/Tier III Requirement and the policies that they are intended to advance, the Authority's power sale agreements would provide for the application of a ZEC purchase requirement to the end-user load that the Authority serves under its power supply programs as LSE, and a ZEC-related charge to the customer that is intended to recover costs that the Authority incurs for purchasing ZECs in quantities that are attributable to the individual customer's load served by the Authority under a power sale agreement.
- For the purpose of implementing its power supply programs in a manner that the Authority determines to be consistent with the SEP and CES, including the RES/Tier I Requirement and the policies that they are intended to advance, the Authority's power sale agreements would provide for the Authority's procurement of RECs through means determined by the Authority in quantities that are intended to correspond to the annual 'mandatory minimum percentage proportions' identified in the CES Order as applied to the load that the Authority serves in a given calendar year, and ultimately the SEP's '50 x 30' goal, and a RES/REC-related charge to the customer that is intended to recover from individual customers costs that the Authority incurs for purchasing RECs in quantities that are attributable to the individual customer's load served by the Authority under a power sale agreement.

A description of the compliance program as it would be applicable to the EP and RP programs, and the applicable methodologies that were developed in order to implement the compliance programs for these specific programs, are detailed in Schedules D and E of the Proposed Expansion Contract. Although earlier versions of the Authority's power supply agreements for WNY Hydropower contained provisions related to the ZEC and RES/REC requirements and for cost recovery related thereto, the provisions contained in the Proposed Expansion Contract have been further developed based on, among other things, the Authority's experience with SEP and CES-related requirements, the renewable energy market, possible compliance approaches for the Authority's power supply programs, discussions with Authority Customers, and consideration of the Authority's own mission.

Compliance programs for other Authority power supply programs would be set forth in future power supply agreements that will be used for these programs, and are expected to be modeled after the approaches provided in Schedules D and E. Given that the Authority's power sale agreements are subject to review and approval of the Trustees, the Trustees will have an opportunity to review the final provisions of any such compliance program when specific power supply agreements are presented to the Trustees for review and approval.

RECOMMENDATION

The Vice President - Economic Development recommends that the Trustees:

1. Authorize a public hearing, in accordance with PAL §1009, on the form of Proposed Extension Contract that would, along with a new Authority service tariff ST WNY-2, apply to the sale of Allocations that are conditionally proposed for extension.
2. Approve an extension through the Extended Term (December 31, 2028), of the term of each Allocation listed in Exhibit '5d i-1c-B' and Exhibit '5d i-1c-C' contingent upon the following conditions:

- a. that the sale of the Extended Allocations shall be governed by ST WNY-2 and Proposed Extension Contract that is presented to the customer in final form following the conclusion of the public hearing and approval process provided for in PAL §1009;
 - b. that the customer agree, for the Extended Term, to the same or substantially similar supplemental commitments for jobs and capital investments that are contained in its Current WNY Hydropower Agreement, through the incorporation of such supplemental commitments into the final Proposed Extension Contract that is executed by the customer;
 - c. that, in the case of a customer whose existing supplemental commitments do not include an annual capital investment commitment, such customer agree to an annual capital investment commitment for the Extended Term that Authority staff determines to be appropriate based on the customer's circumstances; and
 - d. that the customer is in compliance with its supplemental commitments for jobs and capital investments under its Current WNY Hydropower Agreement.
3. Authorize the Authority to design and implement comprehensive compliance programs for the purpose of implementing the Authority's power supply programs, including the EP, RP, Preservation Power, RNY Power, and the Authority's governmental power supply programs, in a manner that the Authority determines to be consistent with the SEP and CES, including ZEC/Tier III and RES/Tier I Requirements and the policies they are intended to advance.

For the reasons stated, I recommend the approval of the above-requested action by adoption the resolution below."

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

RESOLVED, That the Trustees hereby authorize a public hearing on the proposed extension contract for the sale of Replacement Power ("RP") and Expansion Power ("EP") ("WNY Hydropower"), a copy of the form of which, along with new Authority Service Tariff WNY-2 ("ST WNY-2"), is attached as Exhibit "5d i-1c-A" (hereinafter, the "Proposed Extension Contract") to the foregoing report of the President and Chief Executive Officer ("Report"), to be held at the Niagara Power Project's Power Vista Visitors' Center on a date to be determined; and be it further

RESOLVED, That the Corporate Secretary be, and hereby is, authorized to transmit copies of the Proposed Extension Contract to the Governor, the Speaker of the Assembly, the Minority Leader of the Assembly, the Chairman of the Assembly Committee on Ways and Means, the Temporary President of the Senate, the Minority Leader of the Senate and the Chairman of the Senate Finance Committee, pursuant to Public Authorities Law ("PAL") §1009; and be it further

RESOLVED, That the Trustees hereby approve an extension of the term of each WNY Hydropower allocation listed on Exhibits "5d i-1c-B" and "5d i-1c-C" to the accompanying Report (hereinafter, the "Allocation" or

collectively, "Allocations"), to December 31, 2028 (the "Extended Term"), subject to the following conditions:

- a. that the sale of the Allocations as extended shall be governed by Service Tariff WNY-2 and the Proposed Extension Contract in the form that is finally presented to the customer following the review and approval process provided for in PAL §1009;
- b. that the customer agrees, for the Extended Term, to the same or substantially similar supplemental commitments for jobs and capital investments that are contained in current WNY Hydropower agreement(s) with the Authority (collectively, "Current WNY Hydropower Agreement"), through the incorporation of such supplemental commitments into the Proposed Extension Contract that is executed by the customer;
- c. that, in the case of a customer whose existing supplemental commitments do not include an annual capital investment commitment, such customer agree to an annual capital investment commitment for the Extended Term that Authority staff determines to be appropriate based on the customer's circumstances; and
- d. that the customer is in compliance with its supplemental commitments for jobs and capital investments under its Current WNY Hydropower Agreement;

AND BE IT FURTHER RESOLVED, That the Trustees, in addition to authorizations previously provided, authorize the Authority to design and implement comprehensive compliance programs for the purpose of implementing the Authority's power supply programs, including the EP, RP, Preservation Power, and Recharge New York Power programs, and the Authority's governmental power supply programs, in a manner that the Authority determines to be consistent with the State Energy Plan and the State's Clean Energy Plan, including Zero Emission Credit/Tier III and Renewable Energy Standard/Tier I requirements and the policies they are intended to advance; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

d. Award of Fund Benefits from the Northern New York Economic Development Fund Recommended by the Northern New York Power Proceeds Allocation Board

The President and Chief Executive Officer submitted the following report:

SUMMARY

The Trustees are requested to accept the recommendations of the Northern New York Power Proceeds Allocation Board (the 'Allocation Board') and make an award of Fund Benefits from the Northern New York Economic Development Fund to the eligible applicant listed in Exhibit '5d i-1d-A' in the amount indicated on Exhibit '5d i-1d-A,' as discussed in more detail below and in Exhibit '5d i-1d-C,' and authorize the other actions described herein with respect to the applicant and recommended award.

BACKGROUND

1. Northern New York Power Proceeds Allocation Act

On December 29, 2014, Governor Cuomo signed into law the Northern New York Power Proceeds Allocation Act (the 'Act'). The Act adds provisions to two chapters of consolidated law, the Economic Development Law ('EDL'), and the Public Authorities Law within the Power Authority Act, the enabling statute of the New York Power Authority ('NYPA') (collectively, the 'Statutes'). As discussed in more detail below, the Act creates a program, administered by NYPA and the Board, to support economic development in Northern New York ('Program'). Under the Program, financial assistance known as 'fund benefits' may be awarded to 'eligible applicants' for 'eligible projects' based on criteria set forth in the Statutes.

Under the Act, an 'eligible applicant' is a private business, including a not-for-profit corporation that is a private business. 'Eligible projects' is defined to mean 'economic development projects' that are or would be physically located within St. Lawrence County that will support the growth of business in St. Lawrence County and thereby lead to the creation or maintenance of jobs and tax revenues for the state and local governments. 'Eligible projects' include, for example, capital investments in buildings, equipment, and associated infrastructure owned by an eligible applicant; transportation projects under state or federally approved plans; the acquisition of land needed for infrastructure; research and development where the results of such research and development will directly benefit New York State; support for tourism and marketing and advertising efforts for St. Lawrence County tourism and business; and energy-related projects.

Eligible projects do not include, and fund benefits may not be used for, public interest advertising or advocacy; lobbying; the support or opposition of any candidate for public office; the support or opposition to any public issue; legal fees related to litigation of any kind; expenses related to administrative proceedings before state or local agencies; or retail businesses as defined by the board, including without limitation, sports venues, gaming and gambling or entertainment-related establishments, residential properties, or places of overnight accommodation.

NYPA and the Town of Massena Electric Department are parties to a contract that provides for NYPA's sale of up to 20 megawatts ('MW') of hydropower known as 'St. Lawrence County Economic Development Power' ('SLCEDP') to the Town. As detailed in the Statutes, NYPA is authorized to sell unallocated SLCEDP into the market to generate revenue for the Program. The Statutes provide that NYPA will deposit proceeds from such sales into the Fund no less than quarterly.

At least 15% percent of the Fund is dedicated to eligible projects which are 'energy-related projects, programs and services,' which are defined as 'energy efficiency projects and services, clean energy technology projects and services, and high performance and sustainable building programs and

services, and the construction, installation and/or operation of facilities or equipment done in connection with any such projects, programs or services.'

Monies from the Fund – known as 'fund benefits' – are paid to awardees in the form of grants, and staff expects that in most cases fund benefits will be disbursed as reimbursement for expenses incurred by an awardee. Allocations of fund benefits may only be made on the basis of monies that have been deposited in the Fund. No award may encumber funds that have not been deposited in the Fund.

2. Northern New York Power Proceeds Allocation Board

Under the Act, the Allocation Board's primary responsibilities regarding applications for fund benefits under the Program are to (i) administer the application process, (ii) make determinations relating to eligibility, and (iii) where an applicant and project are eligible, evaluate applications against the statutory criteria and make a recommendation to the NYPA Board of Trustees on whether an applicant should be awarded fund benefits. The Allocation Board uses the criteria applicable to EP, RP and PP allocations, and for revitalization of industry, provided for in Public Authorities Law §1005.

Additionally, the Allocation Board is authorized to consider the extent to which an award of fund benefits is consistent with the strategies and priorities of the North Country Regional Economic Development Council, which covers the region in which an eligible projects may be proposed.

At its meeting on January 25, 2017, the Allocation Board, in accordance with the Act, adopted by-laws, operating procedures, guidelines related to the application, and a form of application. A copy of the relevant criteria (collectively, 'Program Criteria'), adapted from the Allocation Board's 'Procedures for the Review of Applications for Fund Benefits,' is attached as Exhibit '5d i-1d-B' to this report.

Under the Act, a recommendation for Fund Benefits by the Allocation Board is a prerequisite to an award of Fund Benefits by the Authority, and the Act authorizes the Authority to award Fund Benefits to an applicant upon a recommendation of the Allocation Board. Upon a showing of good cause, the Authority has discretion as to whether to adopt the Allocation Board's recommendation, or to award benefits in a different amount or on different terms and conditions than proposed by the Allocation Board. In addition, the Authority is authorized to include within the contract covering an award ('Award Contract') such other terms and conditions the Authority deems appropriate.

3. Application Process

In an effort to provide for the efficient review of applications and disbursement of Fund Benefits, the Allocation Board established a schedule of dates through the end of 2018 on which the Allocation Board would meet to consider applications. At this time, applications are being accepted on a rolling basis. A webpage was created that is hosted on WWW.NYPA.GOV/NNYPPAB with application instructions, a link to the approved application form and other program details including a contact phone number and email address staffed by NYPA.

DISCUSSION

At its August 9, 2018 meeting, the Allocation Board considered an application from Kingston Pharma LLC ('Kingston') seeking \$200,000 in Fund Benefits.

Allocation Board staff analyzed the application and made recommendations to the Allocation Board based on eligibility requirements and Program Criteria. A copy of the recommendation provided to the Allocation Board for Kingston is attached as Exhibit '5d i-1d-C.' The application itself has also been made available to the Trustees for review.

As detailed in Exhibit '5d i-1d-C,' the Kingston application seeks Fund Benefits to support a building acquisition and expansion, the purchase of machinery and equipment and reimbursement of

other costs related to its proposed project. The applicant indicates that as part of the project it would retain 12 and create 45 full time positions over three years and that it would spend approximately \$2,200,000 on this project.

The Allocation Board has recommended that this applicant receive a Fund Benefit award in the amount indicated on Exhibit '5d i-1d-A.' Given the nascent stage of the proposed project, it was not possible to make recommendations concerning the terms and conditions that would be applicable to the award and memorialized in an Award Contract between the Authority and the applicant.

If this applicant does receive a Fund Benefit award, it is anticipated that Authority staff would negotiate final terms and conditions with the applicant after receipt of more detailed information concerning the project and proposed schedules. Award Contracts may include scheduled payments keyed to commitment milestones, such as employment creation and retention. In addition, staff anticipates that Award Contracts will contain provisions for periodic audits of the successful applicants for the purpose of determining contract and program compliance and, where appropriate, terms providing for the partial or complete recapture of Fund Benefits disbursements if an applicant fails to maintain agreed-upon commitments.

RECOMMENDATION

The Vice President – Economic Development recommends that:

- (1) the Trustees accept the recommendation of the Allocation Board and make an award of Fund Benefits to the applicant in the amount identified in Exhibit '5d i-1d-A,' conditioned upon an agreement to be negotiated with the applicant on the final terms and conditions that would be applicable to the award to be contained in the Award Contract approved by the President and Chief Executive Officer, or his designee, and approved by the Executive Vice President and General Counsel, or his designee, as to form;
- (2) the Chief Commercial Officer – Energy Solutions, or such official's designee, be authorized to negotiate with the applicant concerning such final terms and conditions that will be applicable to the award; and
- (3) the Chief Commercial Officer – Energy Solutions, or such official's designee, be authorized to execute on behalf of the Authority an Award Contract for the award listed on Exhibit '5d i-1d-A' subject to the foregoing conditions.

For the reasons stated, I recommend the approval of the above-requested actions by adoption of the resolution below."

Upon motion made by Vice Chairman Nicandri and seconded by Trustee Balboni the following resolution, as submitted by the President and Chief Executive Officer, was unanimously adopted.

WHEREAS, The Northern New York Power Proceeds Allocation Board ("Allocation Board") has recommended that the Authority make an award of Fund Benefits from the Northern New York Economic Development Fund ("Fund") to the eligible applicant listed in Exhibit "5d i-1d-A" in the amount indicated in Exhibit "5d i-1d-A";

NOW THEREFORE BE IT RESOLVED, That the Authority hereby accepts the recommendation of the Allocation Board and authorizes an award of Fund Benefits to the applicant listed in Exhibit "5d i-1d-A" in the amount indicated and for the reasons set forth in the foregoing

report and the exhibits and other information referred to therein, conditioned upon an agreement between the Authority and the applicant on the final terms and conditions that would be applicable to the award and set forth in a written award contract ("Award Contract") between the Authority and the applicant, approved by the President and Chief Executive Officer, or his designee, and approved by the Executive Vice President and General Counsel or his designee, as to form; and be it further

RESOLVED, That the Chief Commercial Officer – Energy Solutions, or such official's designee, is authorized to negotiate with the applicant concerning such final terms and conditions that will be applicable to the award; and be it further

RESOLVED, That the Chief Commercial Officer – Energy Solutions, or such official's designee, is authorized to execute on behalf of the Authority an Award Contract for the award listed on Exhibit "5d i-1d-A" subject to the foregoing conditions; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

2. Moonshot Report:

a. Procurement (Services) Contract – Electric Vehicle Supply Equipment – Contract Award

The President and Chief Executive Officer submitted the following report:

“SUMMARY

The Trustees are requested to authorize the award of six contracts, each with a five-year term, in an aggregate amount of \$60 million, to provide Electric Vehicle Supply Equipment (‘EVSE’ or ‘charging stations’), including optional installation and networking services, to the following firms:

1. Apex Solar Power of Queensbury, New York
2. EV Connect, Inc. of El Segundo, California
3. Efacec USA, Inc. of Norcross, Georgia
4. EVgo Services LLC of Los Angeles, California
5. Verdek LLC of Madison, Connecticut
6. Zeco Systems, Inc. (dba Greenlots) of Los Angeles, California

The awards are contingent on the approved vendors agreeing to NYPA’s commercial terms and conditions. Forty million dollars (\$40 million) of these contracts will be used to support the Authority’s EVolve NY Program approved by the Trustees at their May 22, 2018 meeting. In addition, \$20 million of these contracts will be used for the existing Energy Efficiency Program for projects in support of the Governor’s Charge NY Initiative (the ‘EVSE Projects’). The Charge NY Initiative aims to create a statewide network of up to 10,000 EVSE in New York State by 2021.

The EVSE Projects implemented under the Energy Efficiency Program will use funds previously approved by the Trustees at their meeting on December 15, 2017. Project costs will be recovered directly from the participants.

BACKGROUND

Section 2879 of the Public Authorities Law and the Authority’s Guidelines for Procurement Contracts require the Trustees’ approval for procurement contracts involving services to be rendered for a period in excess of one year.

In accordance with the Authority’s Expenditure Authorization Procedures, the award of non-personal services or equipment contracts in excess of \$6 million require the Trustees’ approval.

The Energy Efficiency Program provides energy efficiency, clean energy technologies and sustainability services to customers meeting the eligibility criteria under Public Authorities Law, Section 1005. Energy efficiency services include audits, design, engineering, procurement, and installation services related to a wide variety of energy technologies and renewables, including the installation of EVSE.

DISCUSSION

A request for proposals (‘RFP’) was advertised in the New York State *Contract Reporter* on April 27, 2018, and posted on the Authority’s Procurement website on April 27, 2018, for the design, fabrication, delivery, installation, start-up, and service of EVSE at various locations throughout New York State. In response to the RFP, eleven proposals were received by the June 7, 2018 deadline. Four Bid Addenda and two Post-Bid Addenda were issued in response to prospective bidder questions and requests for clarifications.

A committee with representatives from Energy Services Product Development, Strategy and Strategic Supply Management evaluated the proposals. The proposals were evaluated based on the following technical criteria as well as compliance to the commercial terms and conditions of the RFP:

- Firm's experience managing similar EVSE projects
- Knowledge of EVSE technologies and best practices
- Compliance with industry standards issued by the Society of Automotive Engineers ('SAE') and Underwriters Laboratories ('UL')
- Compliance with NYPA's networking data requirements
- Costs for EVSE equipment, design, installation labor, networking and extended warranty

Upon evaluation of the proposals, the committee reached the conclusion that Apex Solar Power, EV Connect, Inc., Efacec USA, Inc., EVgo Services LLC, Verdek LLC, Zeco Systems, Inc. (dba Greenlots) were the lowest qualified bidders and the most compliant to NYPA's specifications and commercial requirements.

FISCAL INFORMATION

No increase in fiscal authorization is being requested for the Energy Efficiency Program at this time. The funding for these EVSE Projects will be provided from the Authority's operating funds and/or from the proceeds of the Authority's Commercial Paper Notes or other financing instruments, as deemed appropriate. All Authority costs, including overheads and the costs of advancing the funds, will be recovered.

Value contracts in the aggregate amount of \$60 million with a term of five years are recommended based on the \$40 million of funding approved for the initial phase of the EVolve NY Program and an estimated \$20 million pipeline of additional EVSE work under the existing Energy Efficiency Program.

RECOMMENDATION

The Vice President – Strategic Supply Management, and the Vice President – Clean Energy Business & Market Development recommend that contract awards be made to Apex Solar Power, EV Connect, Inc., Efacec USA, Inc., EVgo Services LLC, Verdek LLC, and Zeco Systems, Inc. (dba Greenlots), in the aggregate amount of \$60 million, and a term of five years, to provide Electric Vehicle Supply Equipment ('EVSE' or 'charging stations') in support of the EVolve NY Program and the Charge NY initiative.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below."

Mr. Robert Lurie provided an update on the Authority's Electric Vehicle ("EV") Moonshot investment area and highlights of staff's recommendation for the EV Supply Equipment contract award to the Board. He said that the Moonshot investment areas support all of the state's policy initiatives mentioned earlier by President Quiniones, especially reducing greenhouse gas emissions by 40 percent by 2030.

The three Moonshot investment areas are:

- 1) EV acceleration - accelerating the electrification of the transportation sector, which is the largest GHG emitter in the economy;*
- 2) Transition to renewable energy and making sure that it is done affordably and efficiently, especially including offshore wind.*

- 3) *Creating more flexibility in the power grid that will allow the Authority to absorb those renewables in the system reliably and affordably.*

EV Acceleration

The Authority has made strong progress in developing the first part of its ultra-fast charger plan, as discussed at the last meeting of the Board. The Authority has completed its analysis of potential sites, both along highway corridors and in urban areas, including the Thruway. Upon completion of the map showing all of the sites, it will be shared with public and local officials.

The Authority is also working with the Port Authority to site and develop a charging hub that could have up to ten chargers at JFK Airport. NYPA is incorporating the private sector in this investment, issuing a Request for Information ("RFI") to potential public and private sector partners to address the barriers in the EV marketplace, both financing and new business models. Forty-five (45) responses to that RFI were received.

The proposals received included proposals to co-finance with the Authority, provide innovative technology, and provide services, including customer education tools, and other software that could support greater EV adoption. Staff is in the process of reviewing the responses and meeting with the companies. Staff will then provide a report to the Board on the findings at a future meeting.

Today, staff is requesting the Board's approval for the award to design build firms to help the Authority develop its charging sites. This will help the Authority begin development in the construction of its DCFC sites throughout New York State. This is also the culmination of a six-month evaluation process, and there are six awardees selected based on the RFP.

Staff is requesting that the Board award five-year contracts in an aggregate amount of \$60 million to the selected firms. The firms were selected through a competitive process, which include both qualitative and quantitative factors. The Authority will be undertaking a "mini bid" to have competitive selection among this group to do the individual site development. These firms have been prequalified.

Volkswagen Settlement

As part of the Volkswagen Settlement, there was an award for allocation of funding through the State Department of Environmental Conservation for EV infrastructure throughout the state. NYPA will be receiving \$40 million of the total \$127 million allocation to New York. In addition to the funds that NYPA has allocated for a corridor infrastructure and urban hub infrastructure this allocation will be used largely for electric buses and supporting workplace charging-stations. This award will also help the Authority to make a difference on transit systems throughout the state.

Upon motion made by Trustee Trainor and seconded by Trustee McGibben, the following resolution as recommended by the President and Chief Executive Officer was unanimously adopted.

RESOLVED, that pursuant to the Guidelines for Procurement Contracts adopted by the Authority and the Authority's Expenditure Authorization Procedures, approval is hereby granted to award five-year contracts to Apex Solar Power, EV Connect, Inc., Efacec USA, Inc., EVgo Services LLC, Verdek LLC, and Zeco Systems, Inc. (dba Greenlots) in the aggregate of amount of \$60 million, to provide Electric Vehicle Supply Equipment ("EVSE" or "charging stations") at various locations throughout New York State in support of the EVolve NY Program and the Governor's Charge NY initiative:

<u>Contractors</u>	<u>Contract Approval</u>
Apex Solar Power Queensbury, NY	Five-year contracts for design, fabrication, delivery, installation, start-up, and service of Electric Vehicle Supply Equipment (EVSE) at various locations throughout New York State, in the aggregate contract value of \$60 million.
EV Connect, Inc. Los Angeles, CA	
Efacec USA, Inc. Norcross, GA	
EVgo Services LLC Los Angeles, CA	
Verdek LLC Madison, CT	
Zeco Systems, Inc. (dba Greenlots) Los Angeles, CA	

AND BE IT FURTHER RESOLVED, That the Trustees hereby authorize the President and Chief Executive Officer, the Executive Vice President and Chief Financial Officer, the Executive Vice President and Chief Commercial Officer, the Vice President – Strategic Supply Management, and the Vice President – Clean Energy Business & Market Development, and/or such officer designated by the President and Chief Executive Officer to execute agreements and other documents by the Authority and the Energy Efficiency Program participants, to execute agreements and other documents with contractors, these agreements having such terms and conditions as the executing officer may approve, subject to the approval of the form thereof by the Executive Vice President and General Counsel, to facilitate the implementation of projects under the Energy Efficiency Program that support the Governor’s Charge NY Initiative (“EVSE Projects”); and be it further

RESOLVED, That the Authority’s Commercial Paper Notes, Series 1, Series 2, and Series 3, and Operating Fund monies may be used, as appropriate, to finance the EVSE Projects; and be it further

RESOLVED, That the Chairman, the Vice Chairman, the President and Chief Executive Officer, the Chief Commercial Officer and all other officers of the Authority are, and each of them hereby authorized on behalf of the Authority to do any and all things, take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.

b. Moonshot

Mr. Doug McMahon, Vice President of Strategy, provided highlights of two of the moonshot investment areas to the Board (Exhibit 5d i-2-A). He said that NYPA is in the process of identifying opportunities to support the state's goal of building 2400 MW of offshore wind by 2030, and, in particular, whether NYPA can make investments to help drive down the cost of offshore wind energy.

Clean Generation - Offshore Wind

European Offshore Wind Study - Update

In August, NYPA signed a Memorandum of Understanding ("MOU") with Con Edison, Long Island Power Authority ("LIPA"), New York Independent System Operator ("NYISO"), and New York State Research and Development Authority ("NYSERDA") for a joint study of European offshore wind transmission and development. The purpose of this study is to build-out a body of knowledge regarding the different regulatory mechanisms, business models, financial models, and ownership structures that various European countries have implemented over the last 15 years in order to inform the build-out of offshore wind in New York beyond the initial phase I of 800 megawatts ("MW") that is already in progress.

Firstly, with regard to the study, the desk-based analysis and interviews with European developers, transmission owners, and regulators will be completed within the next two weeks. In collaboration with the MOU parties and NYPA's own regulatory and communication teams, a public document summarizing the findings will be published in December 2018 before the next Board Meeting.

Secondly, at a public Offshore Wind Technical Conference hosted by the DPS and NYSERDA, NYPA and its consultants presented a 30-minute summary of the initial analysis and findings of the journey of the European Offshore Wind Study. This presentation provided a valuable basis for subsequent public discussion about the Phase 2 Offshore Wind Design and Implementation Planning.

Carbon-free Flexibility

Carbon-free Flexibility is the ability to build the necessary capabilities into the electric grid to enable the efficient dispatch of clean energy resources such as wind, hydro, and solar, when and where they are needed. This will play a critical role in achieving the state's clean energy goals.

Based on analysis in this investment area to date, this could be a significant investment opportunity for NYPA over the next four years. The size of the NYS market is currently estimated at approximately \$100 million; it is expected to grow significantly to approximately \$700 million per year by 2025.

NYSERDA has set a target of 1500 MW of flexible storage in the state by 2025 and has identified NYPA as the entity that can lead by example in this space.

NYPA's geographical spread of its assets across the state and its customer base also make the Authority suitable to provide flexibility in aggregation and at scale - the two attributes believed to be the key to keeping flexibility solutions as simple as possible.

Several potential barriers and challenges, however, need to be addressed in order to realize this market. Some of these barriers have prevented the full value of wind and solar generation implementation from being felt by the consumers, the main barrier of which is how to compensate flexibility participants for value and revenue streams that do not yet exist or are still maturing. To that end, DPS, FERC and NYISO are in the process of designing the regulatory framework and market mechanisms for carbon-free flexibility.

NYPA is considering making a series of investments in Flexibility over the next four years that will:

- 1) Prove the operational value of flexibility technologies to the grid for example, storage and flexibility services such as Non Wires Alternatives (“NWA”), demand response and the creation of virtual power plants;
- 2) Identify the best ways to turn that operational value into revenue streams so that the participants can get compensated; and
- 3) Explore the business and financial models that are going to enable financing of carbon-free flexibility tools at scale.

In order to achieve this goal, partnerships will be essential, particularly if NYPA wants to mature some of the flexibility technologies and services through the three phases.

NYPA could achieve partnerships by collaborating with DPS and NYSERDA to implement projects and enable acceleration of regulatory design and market mechanisms.

NYPA could also collaborate with existing flexibility service providers in the marketplace to enable the Authority to accelerate the operational value of these tools to the grid, as well as to explore some of the business models that would allow it to share the risks in return.

In partnership with the IOUs and NYISO, NYPA can work to build-out these new flexibility markets, integrate its customer data platforms and technology to deliver flexibility solutions at scale.

In the meantime, as NYPA finalizes its four-year business plan for Carbon-free Flexibility, it is leveraging a selection of in-flight projects to start to explore these partnerships and address some of the challenges, e.g. storage. NYPA is looking at three storage projects across the entire energy value chain, each with clear flexibility objectives that will provide immediate value to its customers; help inform NYPA’s longer-term strategy for flexibility investment; and can be used to inform the regulators and other third parties.

NYPA is also building a Demand Response Program utilizing its New York Energy Manager Customer data platform.

Staff will report to the Board on the progress on each of these projects at the December Trustee Meeting.

In summary, there is significant potential for NYPA to play a role in accelerating carbon-free flexibility in the state and providing longer-term carbon-free flexibility services and products to the energy system and its customers.

This investment area is complex because the regulatory framework and revenue mechanisms are still emerging, and the percentage of intermittent renewables in NYPA’s energy mix in New York is now only starting to reach a point where grid planning, operations and markets can feel their impact.

This investment area will therefore be about timing. On the one hand, ideally, NYPA would build-out these services and tools in advance of renewables being on-boarded on to the grid in order to ensure that as carbon-free electrons are being generated they could be consumed at as low a cost as possible. On the other hand, NYPA needs these renewables to be operating in the grid in order to test and optimize flexibility tools such as storage and demand response, at scale, as well as establish the right market mechanisms to ensure participants are compensated.

Between now and the end of the year, the team will be focused on developing and making a clear case for investment in flexibility programs over the next four years that would place NYPA somewhere between being the first mover or an early follower in this area.

6. Board Committee Reports:

a. Finance Committee

Chairperson McKibben said that the Finance Committee met on September 26 and one of the primary topics that the members discussed was forecasting and modeling in different areas, first, looking at hydro modeling and the sources relied on for benchmarking and updating the Authority's new hydro model. The Committee also looked at how modeling and forecasting are used to predict NYPA's hydro generation at the Niagara and the St. Lawrence Power Plants. In addition, the Committee had in-depth discussions about the primary causes around the variability between NYPA's forecast and actual results, what it means around hydro volumes and pricing and how it contributes to NYPA's financial performance. The Committee then discussed the implications of that variability for NYPA's financial performance.

The Committee was briefed on the process for the Authority's upcoming submission to the state of its budget report on cash flow estimates.

The Committee also discussed, broadly, NYPA's strategy and the progress with regard to its EV infrastructure investments and its goal with system developments in this area.

The meeting ended with a short conversation around NYPA's bond ratings.

b. Governance Committee Report

Acting Chair Nicandri said that the Governance Committee voted to recommend the appointment of Ms. Sarah Salati as the new Executive Vice President of Commercial Operations. The motion for the NYPA and Canal Boards to appoint Ms. Salati was included in the Consent Agenda which was previously adopted.

Ms. Salati joins the Authority from the AES Corporation where she spent 13 years in various commercial, strategic, and operational roles across the organization, including at an integrated U.S. utility in the Midwest, a merchant power business in Hungary, and at the regional headquarters located in London, England for Europe, CIS, Africa, Asia, and the Middle East. Most recently, she was responsible for the Global Continuous Improvement Program supporting strategic investment decisions and advancing innovation. Prior to the energy sector, Ms. Salati worked in the agricultural trade, communications, and finance industries.

In addition, the committee received an update on NYPA's diversity and inclusion strategy focusing on leadership support and accountability, training, employee support networks, and policy and program development.

7. **Next Meeting**

The Regular joint meeting of the New York Power Authority and the Canal Corporation will be held on December 11, 2018 **at the Clarence D. Rappleyea Building, White Plains, New York**, unless otherwise designated by the Chairman with the concurrence of the Trustees.

Closing

Upon motion made by Trustee Trainor and seconded by Trustee Balboni the meeting was adjourned at approximately 12:03 p.m.

Karen Delince

Karen Delince
Corporate Secretary

October 2, 2018

EXHIBITS

For

October 2, 2018

Regular Joint Meeting

Minutes

Procurement (Services) and Other Contracts – Awards
(For Description of Contracts See "Discussion")

EXHIBIT "4d i-A"
October 2, 2018

<u>Plant Site</u>	<u>Company Contract #</u>	<u>Start of Contract</u>	<u>Description of Contract</u>	<u>Closing Date</u>	<u>Award Basis¹ Contract Type²</u>	<u>Compensation Limit</u>	<u>Amount Expended To Date</u>	<u>Expected Expenditures For Life Of Contract</u>
COMMERCIAL OPERATIONS – ENERGY EFFICIENCY	Q18-6437JGM; 8 Awards 1. AIRTEK ENVIRON- MENTAL CORP. Long Island City, NY (4600003513) 2. ADELAIDE ENVIRON- MENTAL HEALTH ASSOCIATES, INC. ♦ Brewster, NY (4600003518) 3. CHA CONSULTING, INC. Albany, NY (4600003514) 4. KAM CONSULTANTS CORP. Long Island City, NY (4600003517) 5. LIRO ENGINEERS, INC. Syosset, NY (4600003515) 6. LOUIS BERGER & ASSOCIATES, PC New York, NY (4600003511) 7. LU ENGINEERS ♦ Rochester, NY (4600003512) 8. TRC ENGINEERS, INC. Windsor, CT (4600003516)	08/29/18	Provide asbestos and lead management services	08/28/23	B/P	\$800,000		\$7 million*

*Note: represents aggregate total for up to 5-year term including an interim value of \$800,000 (\$100,000 per contract)

♦ M / WBE: New York State-certified Minority / Women-owned Business Enterprise (indicated by the ♦ symbol after the Company Name)
1 Award Basis: B= Competitive Bid; S= Sole Source; Si= Single Source; C= Competitive Search
2 Contract Type: P= Personal Service; S= (Non-Personal) Service; C= Construction; E= Equipment; N= Non-Procurement; A= Architectural & Engineering Service; L= Legal Service

Procurement (Services) and Other Contracts – Awards
(For Description of Contracts See "Discussion")

EXHIBIT "4d i-A"
October 2, 2018

<u>Plant Site</u>	<u>Company Contract #</u>	<u>Start of Contract</u>	<u>Description of Contract</u>	<u>Closing Date</u>	<u>Award Basis¹ Contract Type²</u>	<u>Compensation Limit</u>	<u>Amount Expended To Date</u>	<u>Expected Expenditures For Life Of Contract</u>
COMMERCIAL OPERATIONS – ENERGY EFFICIENCY	Q18-6431JR; 4 Awards 1. ARCADIS OF NEW YORK New York, NY (4600003499) 2. BURNS & MCDONNELL CONSULTANTS, PC Kansas City, MO (4600003509) 3. TOLL INTERNATIONAL, LLC ♦ New York, NY (4600003507) 4. TURNER AND TOWNSEND, INC. New York, NY (4600003500)	08/27/18	Provide on-call Oracle Primavera consulting services in support of NYPA's Energy Efficiency Program	08/26/23	B/P	\$800,000		\$3 million* *Note: represents aggregate total for up to 5-year term including an interim value of \$800,000 (\$200,000 per contract)
UTILITY OPERATIONS – ASSET & MAINTENANCE MANAGEMENT	USIC LOCATING SERVICES, LLC Indianapolis, IN (Q18-6414JGM; PO# TBA)	10/02/18 (on or about)	Provide underground location response services	10/01/23	B/P			\$694,000* *Note: represents total for up to 5-year term
UTILITY OPERATIONS – ENVIRONMENTAL HEALTH & SAFETY (NIAGARA POWER PROJECT)	MONROE EXTINGUISHER COMPANY, INC. Rochester, NY (N18-20128733GJ; PO# TBA)	10/16/18	Provide portable fire extinguisher inspection services at the Niagara Power Project	10/15/22	B/S			\$30,000* *Note: represents total for up to 4-year term

♦ **M / WBE:** New York State-certified Minority / Women-owned Business Enterprise (indicated by the ♦ symbol after the Company Name)
1 Award Basis: B= Competitive Bid; S= Sole Source; Si= Single Source; C= Competitive Search
2 Contract Type: P= Personal Service; S= (Non-Personal) Service; C= Construction; E= Equipment; N= Non-Procurement; A= Architectural & Engineering Service; L= Legal Service

Procurement (Services) Contracts – Extensions and/or Additional Funding
(For Description of Contracts See "Discussion")

EXHIBIT "4d i-B"
October 2, 2018

<u>Plant Site/ Bus. Unit</u>	<u>Company Contract #</u>	<u>Start of Contract</u>	<u>Description of Contract</u>	<u>Closing Date</u>	<u>Award Basis¹ Contract Type²</u>	<u>Compensation Limit</u>	<u>Amount Expended To Date</u>	<u>Authorized Expenditures For Life Of Contract</u>
CORPORATE COMMUNICA – TIONS	ESSENSE PARTNERS, INC. ♦ New York, NY (Contract# 4600003260)	12/22/16	Continuation of change and knowledge management consulting services	12/21/21	B/P	**500,000	\$929,150	\$4 million*
						*Note: represents total for 5-year term, and includes \$3 million additional funding request and 3-year extension request		
						**Note: request for \$3 million includes \$500,000 interim release for ongoing services		
LAW	FOX ROTHSCHILD, LLP Philadelphia, PA (PO# 4500276754)	08/29/16	Provide legal representation for the Authority in connection with construction litigation	08/28/20	Si/P		\$2,611,290	\$5.1 million*
						*Note: represents total for 4-year term, and includes \$2,250,000 additional funding request		
UTILITY OPERATIONS – ST. LAWRENCE	RSI ROOFING, INC. Gouverneur, NY (PO# 4500286671)	06/21/17	Provide for construction services for the Massena Sub Fanhouse Roof as part of the out building roof replacement project	12/20/18	B/C		\$529,735	\$686,455.37*
						*Note: represents total for 1.5-year term; no additional funding requested; interim approval requested for the period from June 21, 2018 through October 2, 2018 and an extension from October 3, 2018 through December 20, 2018 is also requested		

♦ M / WBE: New York State-certified Minority / Women-owned Business Enterprise (indicated by the ♦ symbol after the Company Name)
1 Award Basis: B= Competitive Bid; C= Competitive Search; S= Sole Source; Si = Single Source
2 Contract Type: P= Personal Service; S= (Non-Personal) Service; C= Construction; E= Equipment; N= Non-Procurement; L= Legal Service

POWER AUTHORITY OF THE STATE OF NEW YORK
ESTIMATED RECEIPTS AND EXPENDITURES 2018 TO 2022
ACTUAL RECEIPTS AND EXPENDITURES 2017

Exhibit 4e iii-A

	Last Year Actual 2017	Curent Year Estimated 2018	Proposed 2019	Proposed 2020	Proposed 2021	Proposed 2022
Revenue & Financial Sources						
Operating Revenues						
Charges for Services	\$ 2,503,760,840	\$ 2,608,972,627	\$ 2,485,494,951	\$ 2,561,789,315	\$ 2,733,049,652	\$ 2,821,753,049
Rentals & Financing Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Operating Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-Operating Revenues						
Investment Earnings	\$ 17,415,415	\$ 23,196,990	\$ 33,718,783	\$ 41,079,676	\$ 47,466,379	\$ 48,789,176
State Subsidies / Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Federal Subsidies / Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal Subsidies / Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Public Authority Subsidies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Non-Operating Revenues	\$ 204,532,225	\$ 260,102,870	\$ 331,942,848	\$ 305,444,298	\$ 306,799,257	\$ 259,646,215
Proceeds from the Issuance of Debt	\$ 108,937,000	\$ 133,880,160	\$ 511,553,963	\$ 440,893,969	\$ 516,512,586	\$ 270,687,649
Total Revenues & Financing Sources	\$ 2,834,645,481	\$ 3,026,152,647	\$ 3,362,710,545	\$ 3,349,207,257	\$ 3,603,827,874	\$ 3,400,876,089
Expenditures						
Operating Expenditures						
Salaries and Wages	\$ 221,548,923	\$ 191,389,846	\$ 187,228,468	\$ 192,845,322	\$ 198,630,682	\$ 204,589,602
Other Employee Benefits	\$ 122,545,374	\$ 137,596,568	\$ 91,360,041	\$ 94,516,812	\$ 97,737,674	\$ 101,014,763
Professional Services Contracts	\$ 101,557,723	\$ 39,395,680	\$ 47,909,750	\$ 49,347,042	\$ 50,827,454	\$ 52,352,277
Supplies and Materials	\$ 99,342,119	\$ 233,448,390	\$ 226,271,378	\$ 222,199,119	\$ 219,490,852	\$ 221,857,138
Other Operating Expenditures	\$ 1,622,447,180	\$ 1,714,621,215	\$ 1,705,269,450	\$ 1,740,831,075	\$ 1,832,106,607	\$ 1,896,167,231
Non-Operating Expenditures						
Payment of Principal on Bonds and Financing	\$ 173,737,000	\$ 33,620,000	\$ 34,581,788	\$ 37,141,239	\$ 36,022,244	\$ 98,513,179
Interest and other Financing Charges	\$ 51,753,455	\$ 60,077,818	\$ 58,534,317	\$ 66,443,445	\$ 85,302,358	\$ 92,102,766
Subsidies to Other Public Authorities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Asset Outlay	\$ 473,926,590	\$ 464,010,558	\$ 760,397,917	\$ 855,051,377	\$ 1,078,932,759	\$ 975,004,980
Grants and Donations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Non-Operating Expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenditures	\$ 2,866,858,365	\$ 2,874,160,074	\$ 3,111,553,108	\$ 3,258,375,432	\$ 3,599,050,631	\$ 3,641,601,937
Capital Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Excess (Deficiency) of Revenues and Capital Contributions over Expenditures	\$ (32,212,884)	\$ 151,992,573	\$ 251,157,437	\$ 90,831,825	\$ 4,777,244	\$ (240,725,847)



**NY Power
Authority**

**Canal
Corporation**

Exhibit 5a i-A
October 2, 2018








CEO Report

Gil Quiniones

President & Chief Executive Officer




October 2, 2018

NYPA Overall Performance - August 2018

Goal	Measure	Year-To-Date 2018		
		Status	Target	Actual
Maintain Infrastructure	Generation Market Readiness (%)		99.40	99.87
	Transmission System Reliability (%)		96.35	96.74
Financial Management	Debt Coverage (Ratio)		2.50*	3.98
	O&M Budget Performance (\$ Millions)		327.4	318.6
Energy Services	MMBTU's Saved		269.2	322.2
	Energy Efficiency Investment in State Facilities (\$ Millions)		65.9	89.1
Workforce Management	Retention (# of Touchpoints)		655*	717
Safety Leadership	DART Rate (Index)		0.78	0.73
Environmental Responsibility	Environmental Incidents (Units)		18	9

*Quarterly measure

Corporate Performance

Status	
	Meeting or Exceeding Target
	Below Target
	Significantly Below Target

Senior Leadership Additions

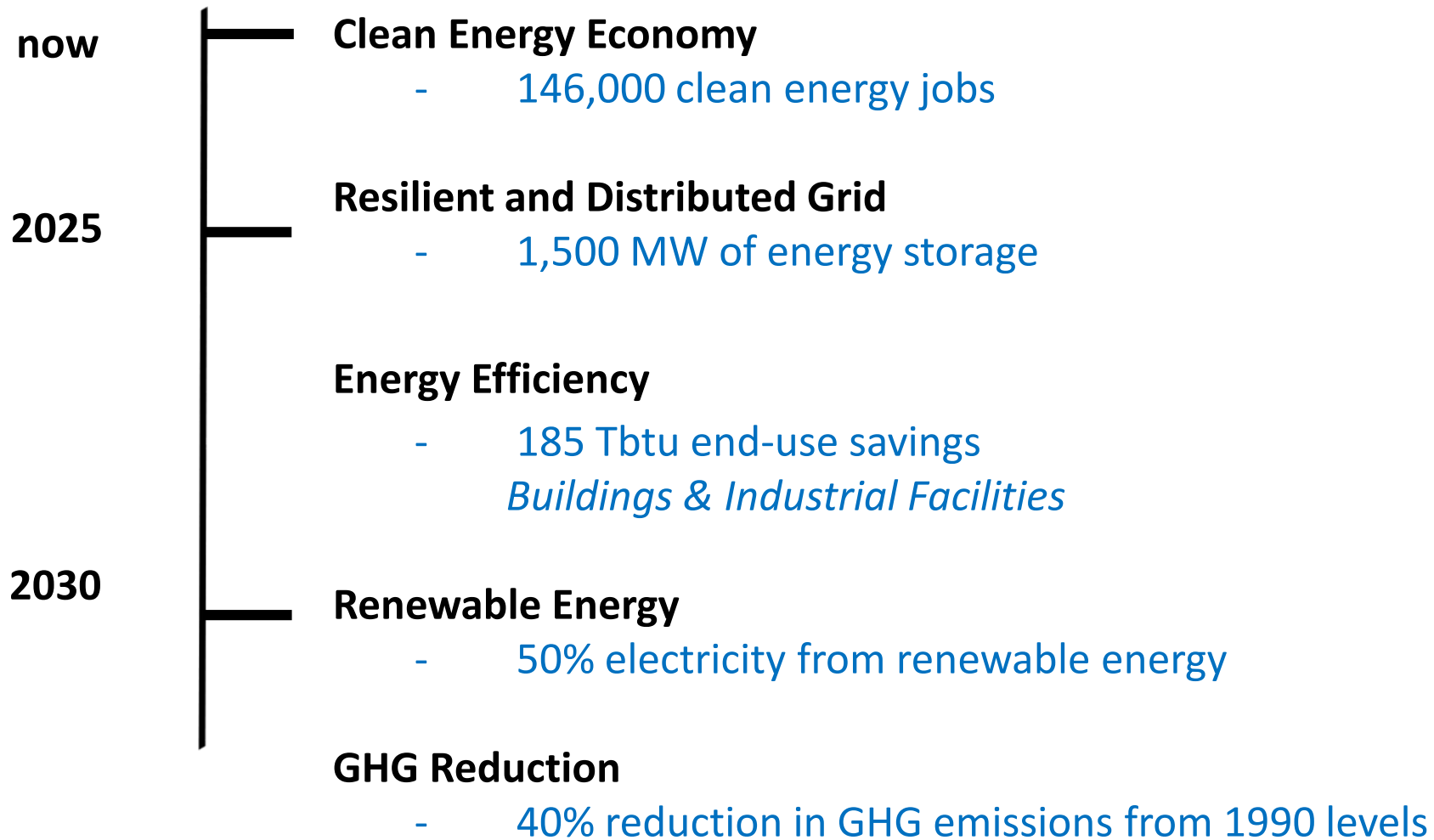
- EVP & Chief Commercial Officer, **Sarah Salati**
- SVP Finance, **Lee Garza**

“Reimagining the Canals” Contest



Winning Teams will be announced on October 3, 2018

New York State Energy Policy Goals





**NY Power
Authority**

Exhibit 5b i-A
October 2, 2018

Chief Financial Officer Report

Lee Garza, SVP Finance

October 2, 2018

2018 Year-to-Date Through July: Budget vs Actual

\$ in Millions

	Budget	Actual	Variance
Margins (Generation, Transmission, Non-Utility)	\$653.2	\$662.9	\$9.7
Operating Expenses	<u>(527.5)</u>	<u>(522.1)</u>	<u>5.4</u>
Net Operating Income	125.7	140.8	15.1
Interest Expense, Net	(77.6)	(78.8)	(1.2)
YTD Net Income	\$ 48.1	\$ 62.0	\$ 13.9

2018 Year End Forecast: Budget vs 7+5 Forecast

\$ in Millions

	Budget	7+5 Forecast	Variance
Margins (Generation, Transmission, Non-Utility)	\$1,125.5	\$1,140.0	\$14.5
Operating Expenses	(915.7)	(919.4)	(3.7)
Net Operating Income	209.8	220.6	10.8
Interest Expense, Net	(132.9)	(128.7)	4.2
Year End Net Income	\$ 76.9	\$ 91.9	\$15.0

Utility Operations

Joseph F. Kessler, P.E.

EVP & Chief Operating Officer

Utility Operations – October 2018 Trustee Items

Capital – current request of \$345.5M

- **Sensor Deployment** Program
- **Communications Backbone** Program
- Moses-Adirondack **Smart Path** Reliability Project
- Clark Energy Center – **Utica Visitors Center**

Procurement (Services) Contracts

- On-Call **Program/Project Management** Services
- Transmission & Distribution (T&D) **Emergency Response & Management** Services

Sensor Deployment Program – Capital Expenditure Authorization Request and Contract Award

Background

- Authorize capital expenditures and ratify the award of a five-year Design/Build contract for Phase II of the Sensor Deployment Program

Highlights

- Design, furnish, and install new sensors and associated networking at all Authority facilities
- Current approved expenditure authorization of \$12.1 million
- Total program estimated to cost \$107.8 million
- Interim contract approval received in September to issue Notice-to-Proceed

Requested Trustee Action

- Authorize capital expenditures in the amount of \$95.7 million
- Ratify five-year, \$76.2 million contract award to E-J O'Connell Sensor Deployment Joint Venture

Communications Backbone Program – Phase II – Capital Expenditure Authorization Request

Background

- Authorize capital expenditures to install Optical Ground Wire (OPGW) on Authority's transmission lines, lease dark fiber and upgrade microwave systems

Highlights

- Phase II includes increased scope to install approx. 600 miles of OPGW and installation of new Fiber Electronics
- Current approved expenditure authorization of \$22.8 million
- Total project estimated to cost \$153 million



Requested Trustee Action

- Authorize capital expenditures in the amount of \$77.5 million

Moses-Adirondack Smart Path Reliability Project – Phase II – Capital Expenditure Authorization Request

Background

- Replace approx. 78 miles of the MA 1 and 2 transmission lines
- Phase II includes funding for permitting, engineering design, pole and foundation steel procurement, logistics and construction services

Highlights

- Article VII application submitted to the Public Service Commission in April
- Project completion is expected in 2023
- Current approved expenditure authorization of \$18.6 million
- Total project estimated to cost \$483.8 million

Requested Trustee Action

- Authorize capital expenditures in the amount of \$124 million



Clark Energy Center – Utica Visitors Center – Capital Expenditure Authorization Request and Contract Award

Background

- New Visitor Center to represent the Clark Energy Center
- Facility will showcase history, present and future state of electricity and the transmission grid within NY State

Highlights

- Facility will be located on City of Utica property, adjacent to the Utica Zoo
- Project includes engineering/design, site development, construction, multimedia production, exhibit design & fabrication, theater fabrication & installation
- Interim contract approval received in September to issue Notice-to-Proceed

Requested Trustee Action

- Authorize capital expenditures in the amount of \$25.5 million
- Ratify two-year, \$15.7 million contract award to LeChase Construction Services, LLC



Procurement (Services) Contract – On-Call Program/Project Management Services – Additional Funding Authorization Request

Background

- Pool of resources required to support internal staff, on as as-needed basis
- Master Service Agreements offer flexibility to quickly retain professional services

Highlights

- Trustees authorized three, five-year contract awards with an aggregate total of \$25 million in December 2017
- Services to be rendered under these contracts include: Program/Project Management, EH&S, Project Controls, Construction Management

Requested Trustee Action

- Authorize an additional \$15 million for these on-call services

Procurement (Service) Contract – T & D Emergency Response and Management Services – Contract Awards

Background

- Contract awards to qualified transmission and distribution (T&D) line contractors to support emergency storm response for Authority assets and mutual aid requests

Highlights

- Services to be rendered under these contracts include: T&D line emergency construction and repair services and management
- Six selected firms have the required experience, local and regional presence and satisfy technical requirements:
 - D&D Power Inc.
 - M10, Inc. (Michels Corporation)
 - Northline Utilities, LLC
 - J.W. Didado Electric, LLC
 - E-J Electric T&D LLC
 - Haugland Energy Group LLC

Requested Trustee Action

- Authorize six, five-year contract awards in the aggregate amount of \$15 million



**NY Power
Authority**

**Canal
Corporation**

EXHIBIT 5d i-1a-A (3 customers)

**NON-COMPLIANCE WITH POWER UTILIZATION COMMITMENT
RECOMMENDED FOR (1) REDUCTIONS IN ALLOCATION/CONTRACT DEMAND, AND (2)
ADJUSTMENT TO JOB COMMITMENTS**

M&T Bank Corporation (Amherst, Erie County)

Allocation: 1,150 kW of Expansion Power (“EP”) (effective 11/1/2017)¹
Contract Demand: 1,150 kW of EP (effective 11/1/2017)
Power Utilization: 935 kW or 81%
Capital Spending: Not Applicable (“N/A”)
Jobs Commitment: 128 jobs (effective 11/1/2017)
Jobs Reported: 5,900 jobs, or 4,609% (Confirmed based on audit)

Background: M&T Bank Corporation (“M&T”) is a data center and provides back office financial services. M&T has historically underutilized its allocation. The business had a shortfall in projected power usage based on environmental conditions and a decrease in projected business growth. The company’s contract allocation and job commitment were reduced in the previous reporting period due to M&T’s power utilization shortfall. Staff obtained recent power utilization data for the first quarter of 2018 which indicates no additional increase in kW utilization.

Recommendation: Staff recommends that the Trustees authorize a reduction in the allocation and contract demand to 1,050 kW, and authorize an adjustment of the job commitment to not less than 116 jobs.

Tulip Corporation (Niagara Falls, Niagara County)

Allocation: 300 kW of EP and 1,200 kW of Replacement Power (“RP”)
Contract Demand: 300 kW of EP and 1,200 kW of RP
Power Utilization: 224 kW and 896 kW, respectively, or 75%
Capital Spending: \$1,270,236 or 1,601%
Job Commitment: 70 jobs
Jobs Reported: 96 jobs, or 137%

Background: Tulip Corporation is an injection molding company that has been contract molding for a wide range of industries since the 1980’s. The company serves markets in the automotive, furniture, defense electronics, sporting goods, appliances, and beverages industries. The company’s power utilization has decreased since the previous reporting period due to a transfer of production from 3125 Highland Ave to 3123 Highland Ave in May 2017. Staff obtained recent power utilization data for the first quarter of 2018 which indicates no additional increase in kW utilization.

Recommendation: Staff recommends that the Trustees authorize a reduction in the EP allocation and associated contract demand to not less than 250 kW, and a reduction in the RP allocation and associated contract demand to not less than 1,050 kW, and authorize an adjustment of the job commitments to not less than 60 jobs respectively.

Washington Mills Electro Minerals Corporation (Niagara Falls, Niagara County)

Allocation: 5,750 kW of RP
Contract Demand: 5,750 kW of RP
Power Utilization: 4,680 kW or 81%

¹ Whenever the discussion indicates that an allocation, contract demand or supplemental commitment is effective as of a date indicated, these matters were subject to modification during the reporting period as a result of previous compliance action or some other circumstance (e.g., voluntary reduction, operational changes).

Capital Spending: \$1,982,334 or 134%
Job Commitment: 58 jobs (effective 11/1/2017)
Jobs Reported: 107 jobs, or 154%

Background: Washington Mills Electro Minerals Corporation manufactures abrasive grains for sandpaper and grinding wheels. Washington Mills Electro Minerals Corporation power utilization has decreased since the previous reporting period. The company has also historically underutilized its allocation. According to the company, efficiency gains resulted in higher productivity but less power usage was required. Staff obtained recent power utilization data for the first quarter of 2018 which indicated no additional increase in kW utilization.

Recommendation: *Staff recommends that the Trustees authorize a reduction in the allocation and contract demand to 5,250 kW, and authorize an adjustment of the job commitment to not less than 53 jobs.*

EXHIBIT 5d i-1a-B (1 customer)

**NON-COMPLIANCE WITH CAPITAL INVESTMENT COMMITMENT
RECOMMENDED FOR (1) REDUCTION IN ALLOCATION/CONTRACT DEMAND, AND (2)
ADJUSTMENTS TO JOB COMMITMENT AND/OR CAPITAL INVESTMENT COMMITMENT**

Monofrax, LLC (Falconer, Chautauqua County)

Allocation: 1,350 kW of EP
Contract Demand: 1,350 kW of EP
Power Utilization: 100%
Capital Spending: \$294,644 or 45%
Job Commitment: 139 jobs (effective 11/1/2017)
Jobs Reported: 183 jobs, or 132%

Background: Monofrax, LLC (“Monofrax”) provides glass manufacturers a wide range of fused cast refractories, including AZS, high Zirconia, alumina and chrome products in twelve different product chemistries. These products have been engineered in dozens of shapes and hundreds of sizes utilizing different casting techniques. The company indicated that high operating costs have restricted its capital investments at this time, and this trend is likely to continue through the remainder of 2018.

Recommendation: *Staff recommends that the Trustees authorize a reduction in the allocation and contract demand to not less than 750 kW, authorize an adjustment of the job commitment to not less than 76 jobs and authorize an adjustment to the capital investment commitment to not less than \$294,644.*

EXHIBIT 5d i-1a-C (7 customers)

**NON-COMPLIANCE WITH SUPPLEMENTAL COMMITMENTS;
RECOMMENDED FOR NO COMPLIANCE ACTION AT THIS TIME**

(1) Job Commitments (4 customers)

API Heat Transfer Inc. (Buffalo, Erie County)

Allocation: 250 kW of RP
Contract Demand: 250 kW of RP
Power Utilization: 94%
Capital Spending: \$549,910 or 143% **(confirmed based on audit)**
Job Commitment: 238 jobs
Jobs Reported: 204 jobs, or 86% (confirmed based on audit)

Background: API Heat Transfer, Inc. is a global leader in the design and manufacturing of specialty heat exchangers and heat transfer solutions. The company was selected for an audit by NYPA's third party auditing firm and the audit confirmed the company's employment level to be at 204 jobs. The company stated that when the oil and gas markets bottomed out in 2017, company sales and employment levels were negatively impacted. However, given the amount of the allocation and the degree of the jobs shortfall, application of the methodology used to calculate potential reductions in contract demand and allocation does not result in a reduction.

Recommendation: *Staff recommends that the Trustees take no action at this time.*

Globe Metallurgical, Inc. (Niagara Falls, Niagara County)

Allocation: 18,400 kW of RP
Power Utilization: 98%
Capital Spending: \$ \$3,550,710 or 105%
Job Commitment: 100 jobs
Jobs Reported: 85 jobs, or 85%

Background: Globe Metallurgical, Inc. produces and sells metallurgical and chemical-grade silicon metals and silicon-based specialty alloys. The company's products are used as inputs in the manufacturing of various industrial and consumer products, including silicone compounds, aluminum, photovoltaic solar cells, electronic semiconductors and industrial pipes and steels. The company stated that negative market conditions in the metals space has impacted its employment levels. However, the company recently provided job counts for the first quarter of 2018 that exceeded the company's employment commitment. Staff will continue to monitor the employment levels over the course of the next reporting period.

Recommendation: *Staff recommends no formal compliance action at this time.*

Allocation: 400 kW of EP
Contract Demand: 400 kW of EP
Power Utilization: 100%
Capital Spending: N/A
Job Commitment: 405 jobs
Jobs Reported: 349 jobs, or 86% (confirmed based on audit)

Background: MOD-PAC Corp. (“MOD-PAC”) is a printer and manufacturer of premium quality folding cartons. The company was selected for an audit by NYPA’s third party auditing firm and the audit confirmed that MOD-PAC’s employment level to be at 349 jobs. However, given the amount of the allocation and the degree of the jobs shortfall, application of the methodology used to calculate potential reductions in contract demand and allocation does not result in a reduction.

Recommendation: *Staff recommends no formal compliance action at this time.*

Try-It Distributing Co, Inc. (Lancaster, Erie County)

Allocation: 200 kW of EP
Contract Demand: 200 kW of EP
Power Utilization: 100%
Capital Spending: N/A
Job Commitment: 265 jobs
Jobs Reported: 232 jobs, or 88% (confirmed based on audit)

Background: Try-It Distributing Co, Inc. is a wholesaler and distributor of beer, wine, liquor and non-alcoholic beverages. The company was selected for an audit by NYPA’s third party auditing firm and the audit confirmed the company’s employment level to be at 232 jobs. However, given the amount of the allocation and the degree of the jobs shortfall, application of the methodology used to calculate potential reductions in contract demand and allocation does not result in a reduction.

Recommendation: *Staff recommends no formal compliance action at this time.*

(2) Power Utilization Commitments (2 Customers)

General Motors LLC (Buffalo, Erie County)

Allocation: 19,650 kW of EP and 2,600 kW of RP
Contract Demand: 19,650 kW of EP and 2,600 kW of RP
Power Utilization: **17,285 kW and 2,285 kW, respectively, or 88%**
Capital Spending: \$31,778,333 or 225%
Jobs Commitment: 675 jobs
Jobs Reported: 1,823 jobs, or 270%

Background: General Motors LLC is a manufacturer of components for automotive heating and cooling systems. The company projected that new load will come on line in 2018 and that should raise the power utilization level above 90%. Two new manufacturing lines are being installed as part of the previously announced investment at the facility. The expected net load increase from the new component lines is approximately 2 MW. Staff obtained recent power utilization data for the first quarter of 2018 which

indicated an increase in power utilization. Staff will continue to monitor power utilization levels over the course of the next reporting period.

Recommendation: *Staff recommends no formal compliance action at this time.*

GM Components Holdings LLC (Lockport, Niagara County)

Allocation: 19,950 kW of EP
Contract Demand: 19,950 kW of EP
Power Utilization: 16,050 kW or 80%
Capital Spending: \$ 11,460,632 or 222%
Jobs Commitment: 779 jobs
Jobs Reported: 1,487 jobs, or 191%

Background: GM Components Holdings LLC manufactures automotive compressors. This is the third year GM fell below its power utilization commitment. Notably, two electric furnaces were taken out of service and rebuilt during 2017 which reduced the facility's monthly electric load. The company has indicated that these furnaces are set to resume production by the second quarter of 2018. Staff obtained recent power utilization data for the first quarter of 2018 which indicates an increase in kW utilization. Staff will continue to monitor power utilization over the course of the next reporting period.

Recommendation: *Staff recommends no formal compliance action at this time.*

(3) Job and Capital Investment Commitment (1 Customer)

Ceres Crystal Industries Inc. (Niagara Falls, Niagara County)

Allocation: 2,600 kW of RP
Contract Demand: 2,600 kW of RP
Power Utilization: 91%
Capital Spending: \$56,800, or 71%
Jobs Commitment: 35 jobs
Jobs Reported: 23 jobs, or 66%

Background: Ceres Crystal Industries Inc. is a manufacturer of zirconia crystal for jewelry applications. At the company's request, the Authority has terminated this allocation, effective May 31, 2018.

Recommendation: *Compliance action is unnecessary due to the termination of the allocation.*

Summary of Non- Compliant Western New York Hydropower Takeback Reductions & Exhibits - Reporting Period January 1, 2017 - December 31, 2017

EXHIBITS	COMPLIANCE FOCUS (by Exhibit)	# of Customers	kW Return to Program	Adjustments - Empl. Commit.	Adjustments - CIC	Recommendations	
Exhibit A	Employment and kW Utilization	3	800	27	\$ -	Take Action	Reduce kW & Jobs
Exhibit B	Employment, Capital Investment and kW Utilization	1	600	63	\$ 356,755	Take Action	Reduce kW ,Jobs & Cap Inv
Exhibit C	Employment, Capital Investment, and/or kW Utilization	7	0	0	\$ -	Take No Action	No Reductions
Total Takeback Impact		11	1,400	90	\$ 356,755		

Current Reporting Period Year 2017		
(11 non-comp customers, Take Action 4, Take No Action 7)	Total kW Reduction	1,400
	Total Job Reduction	90
	Total Capital Investment Reduction	\$356,755
Last Reporting Period Year 2016		
Previous year Impact (24 non-comp customers, action taken 20, no action taken 4)	Total kW Reduction	4,050
	Total Job Reduction	582
	Total Capital Investment Reduction	\$691,579
Previous Reporting Year 2015		
Previous year Impact (30 non-comp customers, action taken 18, no action taken 12)	Total kW Reduction	12,225
	Total Job Reduction	570
	Total Capital Investment Reduction	\$988,737

Non-Compliance with Power Utilization Commitment – Recommended For (1) Reduction in Allocation/Contract Demand, And (2) Adjustment to Job Commitments (A)

Customer	Allocation (kW)	Employment Commitment (# of Jobs)	Usage Reported	Usage Compliance %	Revised Commitments		Reductions		City	County
					kW	Jobs	kW	Jobs		
M&T Bank Corporation	1,150	128	935	81%	1,050	116	100	12	Amherst	Erie
Tulip Corporation	1,500	70	1,120	75%	1,300	60	200	10	Niagara Falls	Niagara
Washington Mills Electro Mineral Corporation	5,750	58	4,680	81%	5,250	53	500	5	Niagara Falls	Niagara
					TOTALS:		800	27		

Non-Compliance with Capital Investment Commitments – Recommended For (1) Reductions in Allocation/Contract Demand, And (2) Adjustments to Job Commitments and/or Capital Investment Commitments (B)

Customer	Allocation	Employment Commitment (# of Jobs)	Jobs - Reported	Jobs Compliance %	Usage Compliance %	Capital Investment Commitment	Capital Investment Reported	Capital Investment Compliance %	Revised Commitments			Reductions			City	County
									kW	Jobs	Capital Investment	KW	Jobs	Capital Investment		
Monofrax, LTD	1,350	139	183	132%	100	\$ 651,399	\$ 294,644	45%	750	76	\$ 294,644	600	63	\$ 356,755	Falconer	Chautauqua

Reported Non-Compliance With Supplemental Commitment – Not Recommended for (1) Reductions in Allocation/Contract Demand, Or (2) Adjustments to Job or Capital Investment Commitments (C)

a) Job Commitments

Customer	Allocation (kW)	Employment Commitment (# of Jobs)	Jobs - Reported	Jobs Compliance %	Capital Investment Commitment	Capital Investment Reported	Capital Investment Compliance %	Revised Commitments			Reductions			City	County
								kW	Jobs	Capital Investment	kW	Jobs	Capital Investment		
Globe Metallurgical, Inc.	18,400	100	85	85%	\$ 3,366,667	\$ 3,550,710	105%	18,400	100	\$ 3,366,667	0	0	\$ -	Niagara Falls	Niagara
API Heat Transfer Inc.	250	238	204	86%	\$ 384,000	\$ 549,910	143%	250	238	\$ 384,000	0	0	\$ -	Buffalo	Erie
MOD-PAC Corporation	400	405	349	86%	N/A		N/A	400	405	N/A	0	0	N/A	Buffalo	Erie
Try-It Distributing Company	200	265	232	88%	N/A		N/A	200	265	N/A	0	0	N/A	Lancaster	Erie

b) Power Utilization Commitments

Customer	Allocation (kW)	Employment Commitment (# of Jobs)	Capital Investment Commitment	Usage Reported	Usage Compliance %	Revised Commitments			Reductions			City	County
						kW	Jobs	Capital Investment	kW	Jobs	Capital Investment		
General Motors LLC	22,250	675	\$ 14,136,667	19,570	88%	22,250	675	\$ 14,136,667	0	0	\$ -	Buffalo	Erie
GM Components Holdings, LLC	19,950	779	\$ 5,165,233	16,050	80%	19,950	779	\$ 5,165,233	0	0	\$ -	Lockport	Niagara

c) Job Commitments and Capital Investment Commitments - no action required. Allocation voluntarily terminated allocation effective 5-31-2018

Customer	Allocation (kW)	Employment Commitment (# of Jobs)	Jobs - Reported	Jobs Compliance %	Capital Investment Commitment	Capital Investment Reported	Capital Investment Compliance %	Revised Commitments			Reductions			City	County
								kW	Jobs	Capital Investment	kW	Jobs	Capital Investment		
Ceres Crystal Industries, Inc.*	2,600	35	23	66%	\$ 80,000	\$ 56,800	71%	2,600	35	\$ 80,000	0	0	\$ -	Buffalo	Erie

*No action required. customer voluntarily terminated allocation effective 5-31-2018

POWER AUTHORITY

OF THE

STATE OF NEW YORK

30 South Pearl Street
10th Floor
Albany, New York 12207-3425

**AGREEMENT FOR THE SALE OF
RECHARGE NEW YORK POWER AND ENERGY**

[CUSTOMER]

POWER AUTHORITY OF THE STATE OF NEW YORK

**30 South Pearl Street, 10th Floor
Albany, New York 12207-3425**

**AGREEMENT FOR THE SALE OF
RECHARGE NEW YORK POWER AND ENERGY**

The Power Authority of the State of New York (“Authority”), created pursuant to Chapter 772 of the New York Laws of 1931 and existing under Title 1 of Article 5 of the New York Public Authorities Law (“PAL”), with offices and principal place of business at 30 South Pearl Street, 10th Floor, Albany, New York 12207-3425 (“Authority”), hereby enters into this Agreement for the Sale of Recharge New York Power and Energy (“Agreement”) with _____ [CUSTOMER], with offices located at _____ (“Customer”). The Authority and the Customer are from time to time referred to in this Agreement individually as a “Party” or collectively as the “Parties.”

RECITALS

WHEREAS, the Authority is authorized to make available to, contract with and sell to “eligible applicants” located in New York State “Recharge New York Power” (“RNY Power”) as provided for in PAL § 1005(13-a) and Economic Development Law (“EDL”) § 188-a;

WHEREAS, the Authority has made an award of RNY Power to the Customer (defined in Article 1 of this Agreement as the “Awarded Allocation”) consisting of equal amounts of “RNY Hydropower” and “RNY Market Power” as specified in Schedule A of this Agreement;

WHEREAS, the Customer has (i) elected to purchase the RNY Hydropower and the RNY Market Power (if any) as specified in Schedule A of this Agreement (defined in Article 1 of this Agreement as the “Accepted Allocation”), or (ii) has agreed to purchase an existing Accepted Allocation for the extended term as specified in Schedule A;

WHEREAS, the Trustees have authorized the Authority to, among other things, provide electric service to the Customer at the rates and on the terms and conditions provided for in this Agreement and the applicable Authority service tariff as described herein to enable the Customer to receive the Accepted Allocation; and

NOW THEREFORE, in consideration of the mutual covenants herein, the Authority and the Customer agree as follows:

ARTICLE I
DEFINITIONS

When used with initial capitalization, whether singular or plural, the following terms, as used in this Agreement, shall have the meanings as set forth below. When used with initial capitalization, whether singular or plural, terms defined in schedules, appendices and/or exhibits to this Agreement shall have the meanings set forth in such schedules or appendices.

“Agreement” means this Agreement as further described in the preamble, including all schedules, appendices and other materials incorporated into the Agreement.

“Accepted Allocation” means (i) that portion of the Awarded Allocation that the Customer has elected to accept and purchase in accordance with this Agreement, or (ii) an existing Accepted Allocation that the Customer has agreed to purchase for an extended term, as specified in Schedule A.

“Awarded Allocation” means the amount of RNY Power awarded to the Customer as specified in Schedule A of this Agreement which consists of equal amounts of RNY Hydropower and RNY Market Power.

“Billing Period” has the meaning set forth in Service Tariff No. RNY-1.

“Contract Demand” has the meaning set forth in Service Tariff No. RNY-1.

“Effective Date” means the date that this Agreement is fully executed by the Parties.

“Electric Service” is Firm Power and Firm Energy associated with the Accepted Allocation and sold to the Customer in accordance with the provisions of this Agreement, Service Tariff No. RNY-1 and the Rules.

“Expansion Project” has the meaning set forth in Section VI.2 of this Agreement.

“Facility” means the Customer’s place of business specified in Schedule A to this Agreement that will receive or is receiving the Accepted Allocation.

“FERC” means the Federal Energy Regulatory Commission (or any successor organization).

“FERC License” means the license issued by FERC to the Authority for the continued operation and maintenance of the Niagara Power Project, pursuant to Section 15 of the Federal Power Act, which license became effective September 1, 2007 after expiration of the Project’s original license issued in 1957, and/or the license issued by FERC to the Authority for the continued operation and maintenance of the St. Lawrence-FDR Power Project, pursuant to Section 15 of the Federal Power Act, which became effective November 1, 2003 after expiration of the Project’s original license issued in 1953.

“Firm Energy” has the meaning set forth in Service Tariff No. RNY-1.

“Firm Power” has the meaning set forth in Service Tariff No. RNY-1.

“Hydro Projects” is a collective reference to the Authority’s Niagara Power Project, FERC Project No. 2216, and St. Lawrence-FDR Power Project, FERC Project No. 2000.

“International Joint Commission” (or “IJC”) refers to the entity with responsibility to prevent and resolve disputes between the United States of America and Canada under the *1909 Boundary Waters Treaty* and pursues the common good of both countries as an independent and objective advisor to the two governments. The IJC rules upon applications for approval of projects affecting boundary or transboundary waters and may regulate the operation of these projects.

“Load Serving Entity” or “LSE” has the meaning established by the NYISO in NYISO Tariffs as may be modified from time to time.

“Metering Arrangement” has the meaning set forth in Section II.6 of this Agreement.

“Niagara Project” means the Authority’s Niagara Power Project, FERC Project No. 2216.

“NYEM” means the New York Energy Manager, an energy management center owned and operated by the Authority.

“NYEM Agreement” means a written agreement between the Authority and the Customer providing for the Facility’s enrollment and Customer’s participation in NYEM.

“NYEM Participation” has the meaning specified in Schedule B of this Agreement.

“NYISO” means the New York Independent System Operator, Inc. or any successor organization.

“NYISO Charges” has the meaning set forth in the Service Tariff No. RNY-1.

“NYISO Tariffs” means the NYISO’s Open Access Transmission Tariff or the NYISO’s Market Administration and Control Area Services Tariff, as applicable, as such tariffs are modified from time to time, or any successor to such tariffs.

“Other NYPA Power” means power and energy, other than RNY Power, which the Authority allocates and sells to the Customer pursuant to statute and/or contract.

“Physical Energy Audit” means a physical evaluation of the Facility in a manner approved by the Authority that includes at a minimum the following elements: (a) an assessment of the Facility’s energy use, cost and efficiency which produces an energy utilization index for the Facility (such as an Energy Use Intensity or Energy Performance Indicator); (b) a comparison of the Facility’s energy utilization index to indices for similar buildings/facilities; (c) an analysis of low-cost/no-cost measures for improving energy efficiency; (d) a listing of potential capital improvements for improving energy consumption; and (e) an initial assessment of potential costs and savings from such measures and improvements.

“PSC” means the Public Service Commission of the State of New York.

“Recharge New York Power” (or “RNY Power”) refers to Firm Power and Firm Energy that the Authority is authorized to allocate and sell as provided for in PAL § 1005(13-a) and EDL § 188-a.

“Reporting Period” shall have the meaning specified in Section II.1 of Schedule B of this Agreement.

“RNY Hydropower” means “recharge New York hydropower” as defined in PAL § 1005(13-a)(b), which as more specifically provided for in such statutory provision refers to a certain 455 MW of firm hydroelectric power from the Niagara Project and St. Lawrence Project.

“RNY Market Power” means “recharge New York market power” as defined in PAL § 1005(13-a)(b), which as more specifically provided for in such statutory provision refers to 455 MW of power that the Authorized to procure through market sources, a competitive procurement process, or Authority sources other than the Niagara Project and St. Lawrence Project.

“Rules” refers to the Authority's Rules and Regulations set forth in Chapter X of Title 21 of the Official Compilation of Codes, Rules and Regulations of the State of New York, as may be modified from time to time by the Authority.

“Schedule A” refers to the Schedule A entitled “RNY Power Allocations” which is attached to and made part of this Agreement.

“Schedule B” refers to the Schedule B entitled “RNY Power Supplemental Commitments” which, along with its attachments/appendices, is attached to and made part of the Agreement.

“Schedule C” refers to the Schedule C entitled “Takedown Schedule” which is attached to and made part of the Agreement.

“Schedule D” refers to the Schedule D entitled “Zero Emission Credit Charge” which is attached to and made part of this Agreement.

“Schedule E” refers to the Schedule E entitled “Monthly Renewable Energy Credit Charge” which is attached to and made part of this Agreement.

“Service Information” has the meaning set forth in Section II.13 of this Agreement.

“Service Tariff No. RNY-1” means the Authority's Service Tariff No. RNY-1 issued March 27, 2012, as modified from time to time by the Authority, and which contains, among other things, the schedule establishing rates and other commercial terms for sale of Electric Service to Customer under this Agreement. Service Tariff No. RNY-1 shall be applicable to Electric Service provided to the Customer under this Agreement as of the Effective Date until such time as another Authority tariff applies.

“St. Lawrence Project” means the St. Lawrence-FDR Power Project, FERC Project No. 2000.

“Substitute Energy” means energy the Authority procures and sells to the Customer for the purpose of replacing RNY Hydropower that is not supplied to the Customer due to a curtailment made in accordance with this Agreement and Service Tariff No. RNY-1.

“Supplemental Power” means default or supplemental power and associated energy that is required by the Customer because the Customer’s Accepted Allocation and Other NYPA Power do not satisfy its full electric load.

“Takedown” means the portion of the Allocation that Customer requests to be scheduled for a specific period as provided for in Schedule C, if applicable.

“Takedown Schedule” means a schedule agreed to by the Parties pursuant to which the Accepted Allocation will be made available to the Customer.

“Taxes” have the meaning set forth in Service Tariff No. RNY-1.

“Unforced Capacity” (or “UCAP”) means the electric capacity required to be provided by Load Serving Entities to serve electric load as defined by the NYISO Tariffs and NYISO rules, manuals and procedures.

“Utility Tariff” means the retail tariff(s) of the Customer’s local electric utility filed and approved by the PSC covering the delivery of RNY Power and the sale and delivery of Supplemental Power and RNY Market Power.

ARTICLE II

ELECTRIC SERVICE

1. The Authority will provide Electric Service to enable the Customer to receive the Accepted Allocation for the applicable term in accordance with this Agreement, Service Tariff No. RNY-1 and the Rules. A copy of Service Tariff No. RNY-1 in effect upon the execution of this Agreement is attached to this Agreement as Exhibit 1, and will apply under this Agreement with the same force and effect as if fully set forth herein. The commencement of Electric Service shall be subject to the terms of this Agreement, Service Tariff No. RNY-1 and the Rules, and the applicable operating procedures of the Authority, the Customer’s local electric utility and the NYISO.

2. Service Tariff No. RNY-1 is subject to revision by the Authority from time to time, and if revised, the revised provisions thereof will apply under this Agreement with the same force and effect as if set forth herein. The Authority will provide at least thirty (30) days prior written notice to the Customer of any proposed change in the Rules or Service Tariff No. RNY-1.

3. The Customer shall not be entitled to receive Electric Service for any RNY Power that is not identified as an Accepted Allocation on Schedule A.

4. The Contract Demand may not exceed the Accepted Allocation.

5. If Schedule C specifies a Takedown Schedule for the Accepted Allocation, the Authority will provide Electric Service with respect to the Accepted Allocation in accordance with such Takedown Schedule.

6. As part of its Electric Service to the Customer, the Authority will provide UCAP in amounts necessary to meet the Customer's NYISO Unforced Capacity requirements associated with the Accepted Allocation in accordance with NYISO Tariffs. The Customer shall be responsible to pay the Authority for such UCAP in accordance with Service Tariff No. RNY-1.

7. The Customer's Facility must be metered by the Customer's local electric utility in a manner satisfactory to the Authority, or another metering arrangement satisfactory to the Authority must be provided (collectively, "Metering Arrangement"). A Metering Arrangement that is not satisfactory to the Authority shall be grounds for the Authority in its sole discretion to withhold, suspend, or terminate Electric Service to the Customer. After commencement of Electric Service, the Customer shall notify the Authority in writing within thirty (30) days of any alteration to the Facility's Metering Arrangement, and provide any information requested by the Authority (including Facility access) to enable the Authority to determine whether the Metering Arrangement remains satisfactory. If an altered Metering Arrangement is not made to conform to the Authority's requirements within thirty (30) days of a determination it is unsatisfactory, the Authority may in its sole discretion withhold, suspend, or terminate Electric Service on at least ten (10) days' prior written notice to the Customer. The Authority may, in its sole discretion, waive any of the requirements provided for in this Section II.7 in whole or in part where, in the Authority's judgment, another mechanism satisfactory to the Authority can be implemented to enable the Authority to receive pertinent, timely and accurate information relating to the Customer's energy consumption and demand and render bills to the Customer for all charges that become due in accordance with this Agreement, Service Tariff No. RNY-1 and the Rules.

7. If the Customer has elected to purchase RNY Market Power from the Authority as part of the Accepted Allocation, the Customer may request a modification of such election to elect to purchase solely the RNY Hydropower component of the Accepted Allocation. Such request must be made in writing and may only be made for the full amount of RNY Market Power purchased from the Authority. If the Authority in its sole discretion accepts the request, the Authority will effectuate such cancellation as soon as practicable, taking into consideration any commitments the Authority has made under contracts entered into with third parties for the purpose of securing supply and delivery of RNY Market Power supply and delivery for the Customer and other RNY Power program customers. The Authority shall have the right its sole discretion to reject a request for modification to the extent the Authority determines that such modification would unreasonably increase the costs chargeable to other RNY Power program customers or cause the Authority to incur unrecoverable costs. If the Customer's election is modified pursuant to this provision, the Authority shall have no further obligation to sell RNY Market Power to the Customer for the remaining term of the corresponding Accepted Allocation unless the Authority agrees in writing with the Customer to do so.

8. The Customer acknowledges and agrees that: (a) one or more local electric utilities will be responsible for delivering the Accepted Allocation to the Facility specified in Schedule A,

and the Authority has no responsibility for delivering the Accepted Allocation to the Facility; and (b) unless otherwise agreed to by the Authority in writing, the Customer shall be responsible for securing the agreement or consent of any party that is needed for delivery of the Accepted Allocation to the Facility.

9. By entering into this Agreement, the Customer consents to the exchange of information between the Authority and the Customer's local electric utility pertaining to the Customer that such parties determine is necessary to provide for the sale and delivery of RNY Power to the Customer, the proper and efficient implementation of the RNY Power program, billing related to RNY Power, and/or the performance of such parties' obligations under any contracts or other arrangements between them relating to such matters. In addition, the Customer agrees to complete such forms and consents that the Authority determines are necessary to effectuate such exchanges of information.

10. The Authority may modify, suspend or terminate Electric Service under this Agreement or modify, suspend, or terminate the quantities of power and energy associated with any Accepted Allocation: (a) if such modification, suspension, or termination is required to comply with any final ruling, order or decision of any regulatory or judicial body of competent jurisdiction (including any licensing or re-licensing order or orders of the FERC); (b) the Customer becomes ineligible to receive the Accepted Allocation; or (3) as otherwise provided in this Agreement, Service Tariff No. RNY-1, or in the Rules. Unless such notice is not practicable, the Authority will provide thirty (30) days prior written notice to the Customer before any such modification, suspension, or termination.

11. The Accepted Allocation may be modified by the Authority if the amount of power and energy available for sale as RNY Power from the Hydro Projects is modified as required to comply with any ruling, order or decision of any regulatory or judicial body having jurisdiction. Any such modification will be made on a *pro rata* basis to all of the Authority's RNY Power customers, as applicable, based on the terms of such ruling, order or decision. Unless such notice is not practicable, the Authority will provide thirty (30) days prior written notice to the Customer before any such modification.

12. The provision of Electric Service by the Authority shall be dependent upon the existence of a written agreement between the Authority and the Customer's local electric utility providing for the delivery of RNY Power on terms and conditions that are acceptable to the Authority.

13. The Customer understands and acknowledges that the Authority may from time to time require the Customer to complete forms, provide documentation, execute consents and provide other information (collectively, "Service Information") that the Authority determines is necessary for the provision of Electric Service, the delivery of RNY Power, billing related to the RNY Power Program, the effective and proper administration of the RNY Power program, and/or the performance of contracts or other arrangements between the Authority and the Customer's local electric utility. The Customer's failure to provide such Service Information on a timely basis shall be grounds for the Authority in its sole discretion to modify, suspend, or terminate Electric Service to the Customer.

ARTICLE III

RATES FOR ELECTRIC SERVICE

1. The Customer shall pay for Electric Service and all other applicable charges, fees and assessments in accordance with this Agreement, Service Tariff No. RNY-1 and the Rules. Unless otherwise specified in this Agreement or Service Tariff No. RNY-1, Electric Service shall be subject to the Billing Demand and Billing Energy rates and other charges as provided for in Service Tariff No. RNY-1.

2. No provision of this Agreement or Service Tariff No. RNY-1 shall be construed as a promise, representation or warranty of any nature whatsoever, express or implied, by the Authority that the provision of Electric Service will result in the Customer at any time (i) paying less for electricity than the amount it would have paid had the Customer not entered into this Agreement or procured electric service from another source, or (ii) receiving any other economic, reliability or other benefit except and to the extent expressly set forth in this Agreement or such tariff.

3. Notwithstanding any other provision of this Agreement, Service Tariff No. RNY-1, or the Rules, the demand and energy rates for Electric Service shall be subject to increase by the Authority at any time upon thirty (30) days prior written notice to the Customer if, after consideration by the Authority of its legal obligations, the marketability of the output or use of the Hydro Projects and the Authority's competitive position with respect to other suppliers, the Authority determines in its discretion that increases in rates obtainable from any other Authority customers will not provide revenues, together with other available Authority funds not needed for operation and maintenance expenses, capital expenses, and reserves, sufficient to meet all requirements specified in the Authority's bond and note resolutions and covenants with the holders of its financial obligations. The Authority shall use its best efforts to inform the Customer at the earliest practicable date of its intent to increase the power and energy charges pursuant to this Section III.3. Any rate increase to the Customer under this Section III.3 shall be on a non-discriminatory basis as compared to other Authority customers receiving RNY Power after giving consideration to the factors set forth in the first sentence of this Section III.3. With respect to any such increase, the Authority shall forward to the Customer with the notice of increase, an explanation of all reasons for the increase, and shall also identify the sources from which the Authority will obtain the total of increased revenues and the basis upon which the Authority will allocate the increased revenue requirements among its customers. Any such increase in rates shall remain in effect only so long as the Authority determines such increase is necessary to provide revenues for the purposes stated in this Section III.3.

4. In addition to all other fees, assessments and charges provided for in the Agreement, Service Tariff No. RNY-1 and the Rules, the Customer shall be subject to the Zero Emission Credit

Charge provided in Schedule D and the Monthly Renewable Energy Credit Charge provided in Schedule E.

ARTICLE IV

BILLING; BILLING METHODOLOGY

1. The amount of energy and demand that will be used by the Authority for Customer billing purposes shall be determined based on the methodology provided for in any agreements between the Authority and the Customer's local electric utility regarding the delivery of RNY Power. An alternative basis for billing may be used provided the Parties agree in writing and the Customer's local electric utility provides its consent if the Authority determines that such consent is necessary.

2. The Authority will render bills to the Customer for Electric Service relating to the Customer's Accepted Allocation on or before the fifteenth (15th) business day of the month for charges due for the previous Billing Period. Bills will reflect the amounts due and owing in accordance with this Agreement, Service Tariff No. RNY-1 and the Rules, and are subject to adjustment as provided for in this Agreement, Service Tariff No. RNY-1 and the Rules. As provided in Service Tariff No. RNY-1, bills will include NYISO Charges and Taxes associated with the Accepted Allocation and all other applicable charges, fees and assessments provided for in the Agreement, Service Tariff No. RNY-1 and the Rules. NYISO Charges shall be subject to adjustment consistent with any subsequent NYISO re-billings to Authority.

3. Unless otherwise agreed to by the Authority and the Customer in writing, the Authority shall render bills to the Customer electronically.

4. Bills are due and payable by the Customer within twenty (20) days of the date on which the Authority renders the bill. Unless otherwise agreed to by the Authority in writing, bills are due and payable by electronic wire transfer in accordance with the Rules. Such wire transfer shall be made to J P Morgan Chase NY, NY / ABA021000021 / NYPA A/C # 008-030383, unless otherwise indicated in writing by the Authority.

5. The Authority and the Customer may agree in writing to an alternative method for the rendering of bills and for the payment of bills, including but not limited to the use of an Authority-established customer self-service web portal.

6. The Authority will charge and collect from the Customer all Taxes (including local, state and federal taxes and any applicable equivalent or "in lieu of" payments) the Authority determines are applicable, unless the Customer furnishes the Authority with proof satisfactory to the Authority that (i) the Customer is exempt from the payment of any such Taxes, and/or (ii) the Authority is not obligated to collect such Taxes from the Customer. If the Authority is not collecting Taxes from the Customer based on the circumstances described in (i) or (ii) above, the Customer shall immediately inform the Authority of any change in circumstances relating to its tax status that would require the Authority to charge and collect such Taxes from the Customer.

7. If the Customer fails to pay any bill when due, the Authority may add an interest charge of two percent (2%) of the amount unpaid thereto as liquidated damages, and thereafter, as further liquidated damages, may add an additional interest charge of one and one-half percent (1 1/2%) of the unpaid sum shall be added on the first day of each succeeding Billing Period until the amount due, including interest, is paid in full.

8. If the Customer disputes any item of any bill rendered by Authority, the Customer shall pay such bill in full within the time provided for by this Agreement, and adjustments, if appropriate, will be made thereafter.

9. If at any time after commencement of Electric Service the Customer fails to make complete and timely payment of any two (2) bills for Electric Service, the Authority may in its discretion: (a) require the Customer to deposit with the Authority a sum of money in an amount equal to all charges that would be due under this Agreement for Electric Service for two (2) consecutive calendar months as estimated by the Authority, which sum shall be deemed security for the payment of unpaid bills and/or other claims of the Authority against the Customer upon termination of Electric Service; (b) suspend Electric Service; or (c) modify or terminate Electric Service. If the Customer fails or refuses to provide a security the deposit within thirty (30) days of a request pursuant to this Section IV.9, the Authority may modify, suspend, or terminate Electric Service to the Customer.

10. The rights and remedies provided to the Authority in this Article IV are in addition to any and all other rights and remedies available to Authority under this Agreement, Service Tariff No. RNY-1 and the Rules, and at law or in equity.

ARTICLE V

TRANSMISSION AND DELIVERY

1. The Customer shall be responsible for complying with all requirements of its local electric utility (including any other interconnecting utilities) that are necessary to enable the Customer to receive delivery service for RNY Power.

2. The Customer shall be solely responsible for paying its local electric utility for delivery service associated with the Accepted Allocation in accordance with the Utility Tariff. Should the Authority incur any charges associated with such delivery service, the Customer shall be responsible for reimbursing the Authority for all such charges.

3. The Customer shall be responsible for obtaining any consents and agreements from any third party that are necessary for the delivery of the Accepted Allocation to the Facility, and for complying with the requirements of any such third party, provided that any such consents, agreements and requirements shall be subject to the Authority's approval.

4. The Customer shall be solely responsible for procuring and paying for the procurement, transmission and delivery of (i) all Supplemental Power required by the Customer, and (ii) all RNY Market Power the Customer has elected to purchase from a person other than the Authority, and should the Authority incur charges associated with the procurement, transmission,

or delivery of such Supplemental Power or such RNY Market Power, the Customer shall reimburse the Authority for all such charges.

5. Delivery of Accepted Allocations shall be subject to the Utility Tariff.

6. The Customer understands and acknowledges that delivery of the Accepted Allocation will be made over transmission facilities under the control of the NYISO. The Customer understands and agrees that it shall be responsible to the Authority for all costs incurred by the Authority with respect to the Accepted Allocation for services established in the NYISO Tariffs or any other applicable tariff as provided for in Service Tariff No. RNY-1.

7. The Authority will act as the Load Serving Entity for the Customer's Accepted Allocation (*i.e.*, RNY Hydropower, and RNY Market Power as long as it is purchased from the Authority), or the Authority may arrange for another entity to do so on its behalf. Except as provided for in Article VII of this Agreement with regard to Substitute Energy, the Authority shall not act as the LSE or perform any LSE functions with respect to any (i) Supplemental Power required or consumed by Customer, or (ii) RNY Market Power purchased from a person other than the Authority.

ARTICLE VI

RNY POWER SUPPLEMENTAL COMMITMENTS

1. Schedule B sets forth the Customer's "RNY Power Supplemental Commitments" ("Supplemental Commitments"). The Authority's obligation to provide Electric Service under this Agreement is expressly conditioned upon the Customer's timely compliance with the Supplemental Commitments described in Schedule B as further provided in this Agreement. The Customer's Supplemental Commitments are in addition to all other commitments and obligations provided in this Agreement.

2. If Schedule B provides for the construction of a new facility or an expansion of an existing facility (collectively, "Expansion Project"), and the Customer fails to complete the Expansion Project by the date specified in Schedule B, the Authority may, in its discretion, (i) cancel the Allocation, or (ii) if it believes that the Expansion Project will be completed in a reasonable time, agree with the Customer to extend the time for completion of the Expansion Project.

3. If the Expansion Project results in a completed Facility that is only partially operational, or is material different than the Expansion Project agreed to in Schedule B (as measured by such factors as size, capital investment expenditures, capital improvements, employment levels, estimated energy demand and/or other criteria determined by the Authority to be relevant), the Authority may, in its discretion, on its own initiative or at the Customer's request, make a permanent reduction to the Allocation and Contract Demand to an amount that the Authority determines to fairly correspond to the completed Facility.

4. The Customer shall give the Authority not less than ninety (90) days' advance written notice of the anticipated date of completion of an Expansion Project. The Authority will inspect the Expansion Project for the purpose of verifying the status of the Expansion Project and notify Customer of the results of the inspection. The Authority will thereafter commence Electric Service within a reasonable time subject to the other provisions of this Agreement based on applicable operating procedures of the Authority, Customer's local electric utility and NYISO.

5. In the event of an Expansion Project being completed in multiple phases, at the Customer's request the Authority may, in its discretion, allow commencement of part of the Allocation upon completion of any such phase, provided the Authority will similarly inspect the Expansion Project for the purpose of verifying the status of the completed phase of the Expansion Project. Upon such verification by the Authority of any such completed phase, the Authority, in its discretion, will determine an amount of kW that fairly corresponds to the completed phase of the Expansion Project, taking into account relevant criteria such as any capital expenditures, increased employment levels, and/or increased electrical demand associated with the completed phase of the Expansion Project.

6. Nothing in this Article is intended to limit the Authority's rights and remedies provided for in the other provisions of this Agreement, including without limitation the provisions in Schedule B of this Agreement.

ARTICLE VII

HYDROPOWER CURTAILMENTS AND SUBSTITUTE ENERGY

1. If, as a result of reduced water flows caused by hydrologic conditions, there is insufficient energy from the Hydro Projects to supply the full power and energy requirements of the Authority's firm power customers served from the Hydro Projects, the Authority will have the right to curtail the amount of firm power and energy to which the Customer is entitled as RNY Hydropower under this Agreement in accordance with Service Tariff No. RNY-1. The provision of RNY Market Power, if any, sold to the Customer by the Authority is not subject to curtailment pursuant to this Article VII. The Authority shall provide Substitute Energy to the Customer and the Customer shall pay for such Substitute Energy in accordance with Service Tariff No. RNY-1.

2. The Authority may require the Customer to enter into a separate agreement relating to the provision and sale of Substitute Energy. The provisions of this Agreement will remain in effect notwithstanding the existence of any such separate agreement.

ARTICLE VIII

CONFLICTS

In the event of any inconsistencies, conflicts, or differences between the provisions of Service Tariff No. RNY-1 and the Rules, the provisions of Service Tariff No. RNY-1 will govern. In the event of any inconsistencies, conflicts or differences between the Service Tariff No. RNY-1 or the Rules and any provisions of this Agreement, the provisions of this Agreement will govern.

ARTICLE IX
ADDITIONAL ALLOCATIONS

Upon proper application by the Customer, the Authority may in accordance with applicable law and Authority procedures decide to award additional allocations of RNY Power to the Customer at such rates and on such terms and conditions as the Authority establishes. If the Customer agrees to purchase Electric Service associated with any such additional allocations, the Authority may in its sole discretion: (a) modify Schedule A to this Agreement or issue a supplemental Schedule A to reflect any additional allocations, and issue a modified Schedule B if the Authority determines such action to be appropriate; or (b) offer the Customer a separate contract with the Authority for the purchase of any additional allocations.

ARTICLE X
ENERGY SERVICES

The Authority may periodically communicate with the Customer for the purpose of informing the Customer about energy-related projects, programs and services (“Energy Services”) offered by the Authority that in the Authority’s view could provide value to the Customer and/or provide other benefits, such as support the State’s Clean Energy Standard. The Customer agrees to consider all such Authority communications in good faith, provided, however, that, except as otherwise provided for in this Agreement, participation in any such Energy Services shall be at the Customer’s option, and subject to such terms and conditions agreed to by the Parties in one or more definitive agreements.

ARTICLE XI
NOTICES

1. Notices, consents, authorizations, approvals, instructions, waivers or other communications provided in this Agreement shall be in writing and transmitted to the Parties as follows:

To Authority:

Manager, Business Power Allocations & Compliance
New York Power Authority
123 Main Street
White Plains, New York 10601
Telephone: (914) 681-6200
Facsimile: (914) 390-8156
Electronic mail: recharge.newyork@nypa.gov

To Customer:

Name: _____
Title: _____
Company: _____
Address: _____
Telephone: _____
Facsimile: _____
Electronic mail: _____

2. Except where otherwise herein specifically provided, any notice, communication or request required or authorized by this Agreement by either Party to the other shall be deemed properly given: (a) if sent by U.S. First Class mail addressed to the Party at the address set forth above; (b) if sent by a nationally recognized overnight delivery service, two (2) calendar days after being deposited for delivery to the appropriate address set forth above; (c) if delivered by hand, with written confirmation of receipt; (d) if sent by facsimile to the appropriate fax number as set forth above, with written confirmation of receipt; (e) if sent by electronic mail to the appropriate address as set forth above, with written confirmation of receipt; or (f) if sent by electronic file or data transfer to the appropriate address as set forth above, with written confirmation of receipt. Either Party may change the addressee and/or address for correspondence sent to it by giving written notice in accordance with the foregoing.

ARTICLE XII

SUCCESSORS AND ASSIGNS; TRANSFERS; RESALE

1. This Agreement shall be binding upon, shall inure to the benefit of, and may be performed by, the legal successors and assigns of either Party hereto, provided that no assignment by either Party or any successor or assignee of such Party of its rights and obligations hereunder shall be made or become effective without the prior written consent of the other Party.

2. The Customer may not transfer any portion of the Awarded Allocation or Accepted Allocation, or any right or contract associated with the Awarded Allocation or Accepted Allocation, to any other person, or to a location different than the Facility, unless: (a) the Authority in its discretion agrees in writing to the transfer; and (b) all other requirements applicable to a transfer, including board approvals, are satisfied. In addition, the Authority may require such approvals, and such consents and other agreements from the Customer and other parties, that the Authority determines are necessary in order to effectuate any such assignment. Any purported transfer that does not comply with the foregoing requirements shall be invalid and constitute grounds for the Authority in its sole discretion to suspend Electric Service, or and terminate the Awarded Allocation, the Accepted Allocation and/or this Agreement.

3. The Customer may not sell any portion of the Awarded Allocation or Accepted Allocation to any other person. Any purported sale shall be invalid and constitute grounds for the Authority in its sole discretion to suspend Electric Service, or terminate the Awarded Allocation, Accepted Allocation and/or this Agreement.

ARTICLE XIII
EFFECTIVENESS; TERMINATION; EFFECT

1. This Agreement shall become effective and legally binding on the Parties on the Effective Date.

2. Electric Service under this Agreement shall continue until the earliest of: (a) termination by the Customer with respect to all of the Accepted Allocation upon at least ninety (90) days prior written notice to the Authority; (b) termination by Authority in accordance with this Agreement, Service Tariff No. RNY-1 and/or the Rules; or (c) expiration of the term of the Accepted Allocation. Notwithstanding termination of the Agreement or expiration of the term of the Accepted Allocation, each Party's rights and obligations to render invoices, and make and receive payments for deliveries and performance rendered prior to termination, and with respect to audit, reporting, review, adjustments and disputes, shall remain in effect until fully discharged.

3. The Customer may exercise a partial termination of the Accepted Allocation upon at least ninety (90) days prior written notice to the Authority. Unless otherwise agreed to by the Parties in writing, the termination shall be effective commencing with the first Billing Period following the required ninety-day prior written notice period. In the event of a partial termination, the Authority will furnish the Customer with a revised Schedule A which reflects the revised Accepted Allocation and a revised Schedule B to the extent the Authority deems it appropriate.

4. Any suspension, reduction, termination, or other modification in whole or in part of the Accepted Allocation shall apply equally to the RNY Hydropower component and RNY Market Power component (if any) of the Customer's Accepted Allocation.

5. Unless otherwise provided in this Agreement or agreed to by the Authority in writing, a termination, reduction, or other modification in whole or in part of an Accepted Allocation shall result in a corresponding termination, reduction, or modification of the Customer's Awarded Allocation, and shall apply equally to the RNY Hydropower and RNY Market Power components of the Customer's Awarded Allocation.

ARTICLE XIV

MISCELLANEOUS

1. Choice of Law

Any claim, suit, action or any other proceeding in law or equity arising under, or in any way relating to this Agreement shall be governed by and construed in accordance with the laws of the State of New York to the extent that such laws are not inconsistent with the FERC License and rulings by the IJC and without regard to conflicts of law provisions.

2. Venue

Each Party consents to the exclusive jurisdiction and venue of any state court within or for Albany County, New York, with subject matter jurisdiction for adjudication of any claim, suit, action or any other proceeding in law or equity arising under, or in any way relating to this Agreement.

3. Previous Agreements, Communications and Representations Amendment; and Interpretation

This Agreement shall constitute the sole and complete agreement of the Parties hereto with respect to the sale of the Accepted Allocation and the other subject matter of this Agreement, and supersedes all previous communications between the Parties hereto, either oral or written, including price estimates, with reference to the sale of the Accepted Allocation, provided, however, that the Customer shall remain liable to the Authority for all duties, liabilities, charges and obligations due in accordance with any prior agreement. No modifications of this Agreement shall be binding upon the Parties hereto or either of them unless such modification is in writing and is signed by a duly authorized officer of each of them. No provision shall be construed against a Party on the basis that such Party drafted such provision.

4. Waiver

Any waiver at any time by either the Authority or the Customer of their rights with respect to a default or of any other matter arising out of this Agreement shall not be deemed to be a waiver with respect to any other default or matter. No waiver by either Party of any rights with respect to any matter arising in connection with this Agreement shall be effective unless made in writing and signed by the Party making the waiver.

5. Severability and Voidability

If any term or provision of this Agreement shall be invalidated, declared unlawful or ineffective in whole or in part by an order of the FERC or a court of competent jurisdiction, such order shall not invalidate the remaining terms or provisions hereof. Notwithstanding the preceding sentence, if any provision of this Agreement is rendered void or unenforceable or otherwise modified by a court or agency of competent jurisdiction, the entire Agreement shall, at the option

of either Party and only in such circumstances in which such Party's interests are materially and adversely impacted by any such action, be rendered void and unenforceable by such affected Party.

ARTICLE XV
EXECUTION

To facilitate execution, this Agreement may be executed in as many counterparts as may be required, and it shall not be necessary that the signatures of, or on behalf of, each Party, or that the signatures of all persons required to bind any Party, appear on each counterpart; but it shall be sufficient that the signature of, or on behalf of, each Party, or that the signatures of the Persons required to bind any Party, appear on one or more of the counterparts. All counterparts shall collectively constitute a single agreement. It shall not be necessary in making proof of this Agreement to produce or account for more than a number of counterparts containing the respective signatures of, or on behalf of, all of the Parties hereto. The delivery of an executed counterpart of this Agreement by facsimile, email as a PDF file or other acceptable file format that appropriately captures the signature, or electronic signature, and shall be deemed to have the same legal effect as delivery of an original executed copy of this Agreement.

[SIGNATURES FOLLOW ON NEXT PAGE]

AGREED:

CUSTOMER

By: _____

Name (Print): _____

Title (Print): _____

Date: _____

AGREED:

POWER AUTHORITY OF THE STATE OF NEW YORK

By: _____

Name: Keith T. Hayes

Title: Vice President, Economic Development

Date: _____

SCHEDULE A

RNY POWER ALLOCATIONS

APPLICANT: CUSTOMER

CONSOLIDATED FUNDING APP. No: XXXXXXXX

CUSTOMER:

If you are receiving a new allocation of Recharge New York Power, check the appropriate box below to select one of the options indicated, and confirm your election by signing next to the election made. You may only check one box. The Authority will acknowledge your election and the applicable Accepted Allocation upon executing this Agreement.

If the Authority has made the election, it is because this Schedule A lists an existing Accepted Allocation whose term has been extended. No election option applies in such circumstances.

Option 1

Customer elects to purchase ALL of the RNY Market Power listed under Accepted Allocation from the Authority:

☐ Customer Signature: _____

Option 1 Allocation Information (will apply if ALL of the RNY Market Power that is part of the Awarded Allocation is purchased from the Authority)

Awarded Allocation[^]	Accepted Allocation[^]	Contract Demand	Term of Accepted Allocation	Trustee Award Date	Facility
RNY Hydropower (kW): RNY Market Power (kW): Total (kW):	RNY Hydropower (kW): RNY Market Power (kW): Total (kW):	(kW)	7 years (from the date of commencement of Electric Service)	Month Day, Year	Street, City, NY

*The value listed for the Contract Demand is subject to the Takedown Schedule, if any, attached to the Agreement as Schedule C.

[^]The designation "(X)" following a kW value indicates an Accepted Allocation with an extended term.

OR

SCHEDULE A

RNY POWER ALLOCATIONS

APPLICANT: CUSTOMER

CONSOLIDATED FUNDING APP. No: XXXXXXXX

Option 2

Customer elects to purchase NONE of the RNY Market Power listed under Accepted Allocation from the Authority:

☐ Customer Signature: _____

Option 2 Allocation Information (will apply if NONE of the RNY Market Power that is part of the Awarded Allocation is purchased from the Authority)

Awarded Allocation^	Accepted Allocation^	Contract Demand*	Term of Accepted Allocation	Trustee Award Date	Facility
RNY Hydropower (kW): RNY Market Power (kW): Total (kW):	RNY Hydropower (kW): RNY Market Power (kW): 0 Total (kW):	(kW)	7 years (from the date of commencement of Electric Service)	Month Day, Year	Street, City, NY

*The value listed for the Contract Demand is subject to the Takedown Schedule, if any, attached to the Agreement as Schedule C.

^The designation "(X)" following the kW value indicates an Accepted Allocation with an extended term.

FOR AUTHORITY USE ONLY:

Authority Acknowledgement of Customer election: _____

Accepted Allocation: ____kW

RNY Hydropower purchased from the Authority: ____kW

RNY Market Power purchased from the Authority: ____kW

SCHEDULE B

RNY POWER SUPPLEMENTAL COMMITMENTS

The provision of RNY Power to the Customer is in consideration of, among other things, the supplemental commitments made by the Customer as provided for in this Schedule B.

ARTICLE I **RNY POWER SUPPLEMENTAL COMMITMENTS**

1. Employment

The Customer shall establish and maintain the employment level set forth in Appendix 1 of this Schedule B (the “Base Employment Level”). Unless otherwise provided for in Schedule B, such Base Employment Level shall be the total number of full-time positions held by: (a) individuals employed by the Customer at the Facility identified in Appendix 1 of this Schedule B; and (b) individuals who are contractors or are employed by contractors of the Customer and who are assigned to such Facility (collectively, “Base Level Employees”). The number of Base Level Employees shall not include individuals employed on a part-time basis (less than 35 hours per week); provided, however, that two individuals each working at least 20 hours but not more than 35 hours per week shall be counted as one Base Level Employee.

The Customer shall not establish or maintain the Base Employment Level by transfers of employees from previously held positions with the Customer or its affiliates located within New York State, except that the Base Employment Level may be filled by employees of the Customer laid off from other Customer facilities for bona fide economic or management reasons.

The Authority may consider a request to change the Base Employment Level based on a claim of increased productivity, increased efficiency, or adoption of new technologies or for other appropriate reasons as determined by the Authority. The Authority shall have the sole discretion to make any such change.

2. Capital Investment

The Customer shall make the scheduled capital investments provided in Appendix 2 to this Schedule B.

3. Power Utilization

For each month the Authority provides Electric Service to the Customer, the Customer shall utilize the entire Accepted Allocation, as represented by the Billing Demand (as such term is described in Service Tariff No. RNY-1), provided, however, that if only part of the Accepted Allocation is being utilized in accordance with Schedule C, the Customer shall utilize such part of the Allocation.

SCHEDULE B

4. Energy Efficiency and Conservation Program

The Customer shall implement an energy efficiency and conservation program at the Facility through either: (a) enrollment of the Facility and participation in NYEM in accordance with a NYEM Agreement; or (b) a Physical Energy Audit of the Facility. Either option shall be at the Customer's own expense.

After the Effective Date, the Authority will transmit to the Customer a NYEM Agreement and an election form. The Customer shall elect to either: (a) enroll the Facility and participate in NYEM for a three-year term in accordance with the NYEM Agreement ("NYEM Participation"); or (b) perform a Physical Energy Audit of the Facility. The Customer shall make the election within sixty (60) days of its receipt of the Authority's communication.

If the Customer elects NYEM Participation, it shall execute and return the NYEM Agreement to the Authority with the election form, abide by the NYEM Agreement, and participate in NYEM at its own expense at the rate specified in the NYEM Agreement.

If the Customer elects to perform a Physical Energy Audit, it shall perform the Physical Energy Audit at least once during the term of the Accepted Allocation, but in any event not less than once every five years. The Authority may in its discretion waive the requirement for a Physical Energy Audit, or may agree to a limited physical energy audit of the Facility, where the Authority determines that the Physical Energy Audit is unnecessary based on the age of the Facility, energy efficiency and conservation improvements made at the Facility, the length of the Allocation, or other considerations the Authority determines to be relevant.

Energy efficiency audits and virtual energy audits (including via NYEM Participation) that have been performed at the facility prior to the Effective Date do not satisfy the requirements for an energy efficiency and conservation program under this Section I.4.

ARTICLE II **RECORDKEEPING, REPORTING AND FACILITY ACCESS**

1. Employment

A record shall be kept monthly by the Customer, and provided on an annual basis for the period July 1 through June 30 (the "Reporting Period") to the Authority, of the total number of Base Level Employees who are employed at or assigned to the Customer's Facility identified in Appendix 1 of this Schedule B, as reported to the United States Department of Labor (or as reported in such other record as agreed upon by the Authority and the Customer). Such report shall specify the number of individuals who are employed by the Customer, who are contractors, and who are employed by contractors of the Customer, and shall be certified to be correct by an officer of the Customer, plant manager or such other person authorized by the Customer to prepare and file such report and shall be provided to the Authority on or before the last day of August immediately following the preceding Reporting Period.

SCHEDULE B

2. Capital Investments

The Customer shall comply with the recordkeeping, recording and reporting requirements specified in Appendix 2 to this Schedule B.

3. Power Usage

The Customer shall keep monthly records of the maximum demand utilized each month for each Facility receiving an Accepted Allocation and provide copies and an explanation of such records to the Authority on an annual basis for the Reporting Period on or before the last day of August immediately following the preceding Reporting Period.

4. Energy Efficiency and Conservation Program

Upon the Authority's request, the Customer shall provide the Authority with: (a) a copy of the results of any Physical Energy Audit performed at the Facility (or, at the Authority's option, a report describing the results), performed pursuant to this Agreement; and (b) a description of any energy efficiency or conservation measures that the Customer has implemented at the Facility in connection with any Physical Energy Audit or as a result of NYEM Participation.

5. Facility Access and Information

Notwithstanding any other provision of the Agreement, the Customer shall provide the Authority with such access to the Facility, and such documentation, as the Authority deems necessary to determine the Customer's compliance with the Customer's Supplemental Commitments specified in this Schedule B.

The Customer shall provide information requested by the Authority or its designee in surveys, questionnaires and other information requests relating to energy efficiency and energy-related projects, programs and services.

In addition to any reports or other information required by this Agreement, the Authority or its designee shall have the right to examine and audit on reasonable advance written notice to the Customer all non-confidential written and electronic records and data in order to determine the Customer's compliance with the Customer's RNY Power Supplemental Commitments.

SCHEDULE B

ARTICLE III **COMPLIANCE ACTION BY THE AUTHORITY**

1. Employment Levels

If the annual monthly average number of employees is less than 90% of the Base Employment Level set forth in this Schedule B for the subject Reporting Period, the Authority may reduce the Contract Demand. The maximum amount of reduction will be determined by multiplying the Contract Demand by the quantity one minus the quotient of the average monthly employment during the subject Reporting Period divided by the Base Employment Level. The Authority will round any such reduction to the nearest ten (10) kW. In the event of a reduction of the Contract Demand to zero, the Agreement shall automatically terminate.

2. Capital Investment Levels

The Authority may reduce the Contract Demand as provided in Appendix 2 to this Schedule B.

3. Power Utilization Levels

If the average of the Customer's six (6) highest Billing Demands (as such term is defined in Service Tariff No. RNY-1) is less than 90% of the Customer's Contract Demand in a Reporting Period, the Authority may reduce the Contract Demand. The maximum amount by which the Authority may reduce the Contract Demand shall be determined by multiplying the Contract Demand by the quantity one minus the quotient of the average of the six (6) highest Billing Demands for in such Reporting Period divided by the Contract Demand. Any such reduction shall be rounded to the nearest ten (10) kW. In the event of a reduction of the Contract Demand to zero, this Agreement shall automatically terminate.

4. Additional Compliance Actions

In addition to the Authority's other rights and remedies provided in this Agreement, Service Tariff RNY-1 and the Rules, the Authority may suspend Electric Service to the Customer if the Customer does not comply with any of the requirements in Section I.4 or Article II of this Schedule B.

5. Notice of Intent to Reduce Contract Demand

In the event that the Authority determines that the Contract Demand will be wholly or partially reduced pursuant to Sections III.1, III.2, or III.3 of this Schedule B, the Authority will provide the Customer with at least thirty (30) days prior written notice of such reduction, specifying the amount of the reduction of Contract Demand and the reason for the reduction. Before implementing a reduction, the Authority may consider the Customer's scheduled or unscheduled maintenance or Facility upgrading periods when such events temporarily reduce employment levels or electrical demand, as well as the business cycle.

SCHEDULE B

SCHEDULE B – APPENDIX 1

BASE EMPLOYMENT LEVEL

In accordance with Article 1 of Schedule B, the Customer agrees to a Base Employment Level at the Customer's Facility indicated below on or before the date(s) specified:

Base Employment Level	Facility	Date(s)	Miscellaneous/Notes
	Street, City, NY		
	Street, City, NY		

CONSOLIDATED FUNDING APP. No: XXXXXXXXX

SCHEDULE B

SCHEDULE B – APPENDIX 2

CAPITAL INVESTMENT COMMITMENTS

1. Annual Capital Investment Commitment (if applicable, as specified below)

- a. The Customer agrees to make the following minimum capital investment in the Facility (“Aggregate CI Commitment”) within five (5) years of the commencement of Electric Service under this Agreement:

Aggregate CI Commitment: \$ _____

- b. Each year, the Customer shall record the total amount of capital investment (“Annual CI Expenditures”) made by the Customer at the Facility during the Reporting Period, which shall be provided to the Authority in a form specified by the Authority on or before the last day of August following the end of the most recent Reporting Period.
- c. The Authority will calculate an aggregate amount of capital investment made by the Customer (“Aggregate CI Expenditures”) at its Facility by summing the first five (5) years of Annual CI Expenditures as reported by the Customer, for the purpose of determining the Customer’s compliance with its Aggregate CI Commitment. If the Customer’s Aggregate CI Expenditures as determined by the Authority is less than 90% of its Aggregate CI Commitment, the Contract Demand may be reduced. The maximum amount by which the Authority may reduce the Contract Demand shall be determined by multiplying the Contract Demand by the quantity one minus the quotient of the Aggregate CI Expenditures divided by the Aggregate CI Commitment. Any such reduction shall be rounded to the nearest ten (10) kW. In the event of a reduction of the Contract Demand to zero, this Agreement shall automatically terminate.

2. Expansion Project–Capital Investment Commitment (if applicable, as specified below)

- a. The Customer shall make a minimum capital investment of \$_____ to construct, furnish and/or expand the Facility (“Expansion Project Capital Investment Commitment”). The Expansion Project Capital Investment Commitment is expected to consist of the following approximate expenditures on the items indicated:

Line Item 1 -	\$ _____
Line Item 2 -	\$ _____
Line Item 3 -	\$ _____

Expansion Project Capital Investment Commitment: \$ _____

The Expansion Project Capital Investment Commitment shall be made, and the Facility shall be completed and fully operational, no later than _____ (*i.e.*, within three (3) years of the date of the Authority’s award of the Allocation). Upon request of the Customer, such date may be extended in the discretion of the Authority.

SCHEDULE C

TAKEDOWN SCHEDULE

SCHEDULE D

ZERO EMISSION CREDIT CHARGE

I. DEFINITIONS

When used with initial capitalization, whether singular or plural, the following terms, as used in this Schedule, shall have the meanings as set forth below. Capitalized terms not defined in this Schedule shall have the meaning ascribed to them elsewhere in the Agreement, in Service Tariff No. RNY-1, or in the Rules.

“Affected LSEs” has the meaning provided in Section II.2 of this Schedule D.

“CES Order” means the Order issued by the PSC entitled “Order Adopting a Clean Energy Standard, issued on August 1, 2016, in Case Nos. 15-E-0302 and 16-E-0270, and includes all subsequent orders amending, clarifying and/or implementing such Order or the RES.

“RNY Power Program ZEC Costs” has the meaning provided in Section II.4.b of this Schedule D.

“Government Action” has the meaning provided in Section II.8 of this Schedule D.

“Load Serving Entity” or “LSE” has the meaning provided in the CES Order.

“NYSERDA” means the New York State Energy Research and Development Authority.

“Public Service Commission” means the New York State Public Service Commission.

“Renewable Energy Standard” or “RES” means the Renewable Energy Standard adopted by the State in the CES Order.

“RES Compliance Program” means a program or initiative that the Authority has adopted for the purpose of meeting the RES for the load that the Authority serves under the Recharge New York Power programs as authorized in the Power Authority Act.

“State Energy Plan” means the 2015 New York State Energy Plan as amended from time to time.

“ZEC Purchase Obligation” has the meaning provided in Section II.2 of this Schedule D.

“ZEC Program Year” has the meaning provided in Section II.2 of this Schedule D.

“Zero Emission Credit” or “ZEC” has the meaning provided in the CES Order.

“Zero Emission Credit Charge” or “ZEC Charge” means the charge to the Customer established in this Schedule D.

SCHEDULE D

II. ZEC CHARGE

1. Notwithstanding any other provision of the Agreement, or any provision of Service Tariff No. RNY-1 or the Rules, the Customer shall be subject to a ZEC Charge as provided in this Schedule D. The ZEC Charge shall be in addition to all other charges, fees and assessments provided for in the Agreement, Service Tariff No. RNY-1 and the Rules. By accepting Electric Service under the Agreement, the Customer agrees to pay the ZEC Charge.
2. As provided in the CES Order, the Public Service Commission, as part of the CES and Tier 3 of the Renewable Energy Standard, imposed an obligation on Load Serving Entities that are subject to the CES Order (“Affected LSEs”) to purchase Zero Emission Credits from NYSERDA in an amount representing the Affected LSE’s proportional share of ZECs calculated on the basis of the amount of electric load the LSE serves in relation to the total electric load served by all Load Serving Entities in the New York Control area, to support the preservation of existing at risk nuclear zero emissions attributes in the State (the “ZEC Purchase Obligation”). The ZEC Purchase Obligation is implemented on the basis of program years running from April 1 through March 31 of each year (“ZEC Program Year”).
3. The ZEC Charge is part of a RES Compliance Program that the Authority has adopted for the purpose of supporting the CES and Tier 3 of the RES and implementing the RNY Power program in a manner that is consistent with the New York State Energy Plan. The Authority will comply with the CES and Tier 3 of the RES by applying a form of ZEC Purchase Obligation to the end-user load for which the Authority serves as a load serving entity, including the load that the Authority serves under the RNY Power program.
4. The ZEC Charge, which is intended to recover from the Customer costs that the Authority incurs for purchasing ZECs in quantities that are attributable to the Customer’s RNY Power load served under this Agreement, will be determined and assessed to the Customer as follows:
 - a. The cost of the total ZEC Purchase Obligation for all LSEs in the New York Control Area, including the Authority as a participating load serving entity, will be assessed pursuant to the methodology provided in the CES Order. The Authority will purchase its proportionate share of ZECs from NYSERDA based on the proportion of the forecasted total kilowatt-hours load served by the Authority (i.e., total Authority LSE load) in relation to the forecasted total kilowatt-hours load served by all LSEs in the New York Control Area as provided in the CES Order. The ZEC Purchase Obligations may be based on initial load forecasts with reconciliations made at the end of each ZEC Program Year by NYSERDA.
 - b. The Authority will allocate costs from its ZEC Purchase Obligation between its power programs/load for which it serves as load serving entity, including the RNY Power program load that it serves (the “RNY Power Program ZEC Costs”). Such allocation will be based on the forecasted kilowatt-hours load of the RNY Power program to be

SCHEDULE D

served by the Authority in relation to the forecasted total kilowatt-hours load served by the Authority (total Authority LSE load) for each ZEC Program Year. In addition, any balance resulting from the ZEC Program Year-end reconciliation of ZEC Purchase Obligations will be allocated to the RNY Power program based on the proportion of the actual annual kilowatt-hours load served under such programs to total actual annual kilowatt-hours load served by the Authority (total Authority LSE load).

- c. The Authority will allocate a portion of the RNY Power Program ZEC Costs to the Customer as the ZEC Charge based on the proportion of the Customer's actual kilowatt-hours load for the RNY Power purchased by the Customer to total kilowatt-hours load served by the Authority under the RNY Power program (i.e., RNY Power program level load). In addition, any balance resulting from the ZEC Program Year-end reconciliation of the ZEC Purchase Obligation referenced above will be passed through to the Customer based on the proportion of the Customer's annual kilowatt-hours load purchased under this Agreement to total annual kilowatt-hours load served under the RNY Power program by the Authority (RNY Power Program level load). The ZEC Charge assessed to the Customer shall not include any costs resulting from the Authority's inability to collect a ZEC Charge from any other Authority customer.
5. The Authority may, in its discretion, include the ZEC Charge as part of the monthly bills for Electric Service as provided for in the Agreement, or bill the Customer for the ZEC Charge pursuant to another Authority-established procedure.
6. The Authority may, in its discretion, modify the methodology used for determining the ZEC Charge and the procedures used to implement such ZEC Charge on a nondiscriminatory basis among affected RNY Power customers, upon consideration of such matters as Public Service Commission orders modifying or implementing the CES Order, guidance issued by the New York Department of Public Service, and other information that the Authority reasonably determines to be appropriate to the determination of such methodology. The Authority shall provide Customer with reasonable notice of any modifications to the methodology or procedures used to determine and implement the ZEC Charge.
7. Nothing in this Schedule shall limit or otherwise affect the Authority's right to charge or collect from the Customer any rate, charge, fee, assessment, or tax provided for under any other provision of the Agreement, or any provision of Service Tariff No. RNY-1 or the Rules.
8. If the ZEC Purchase Obligation is modified or terminated by the Public Service Commission or other controlling governmental authority (collectively, "Government Action"), the Authority shall modify or terminate the ZEC Charge, and assess any additional charges or provide any credits to the Customer, to the extent that the Authority determines such actions to be appropriate based on such Government Action.

SCHEDULE E

MONTHLY RENEWABLE ENERGY CREDIT CHARGE

I. DEFINITIONS

When used with initial capitalization, whether singular or plural, the following terms, as used in this Schedule, shall have the meanings as set forth below. Capitalized terms not defined in this Schedule shall have the meaning ascribed to them elsewhere in the Agreement, in Service Tariff No. RNY-1, or in the Rules.

“Alternative REC Compliance Program” has the meaning provided in Section III.1 of this Schedule E.

“Annual REC Percentage Target” has the meaning provided in Section II.2 of this Schedule E.

“CES Order” means the Order issued by the Public Service Commission entitled “Order Adopting a Clean Energy Standard, issued on August 1, 2016, in Case Nos. 15-E-0302 and 16-E-0270, and includes all subsequent orders amending, clarifying and/or implementing such Order or the RES.

“Clean Energy Standard” or “CES” means the Clean Energy Standard adopted by the State in the CES Order.

“Load Serving Entity” has the meaning provided in the CES Order.

“Mandatory Minimum Percentage Proportion” has the meaning provided in the CES Order.

“Monthly Renewable Energy Credit Charge” or “Monthly REC Charge” means the monthly charge to the Customer established in this Schedule E.

“NYSERDA” means the New York State Energy Research and Development Authority.

“Public Service Commission” means the New York State Public Service Commission.

“REC Compliance Measures” mean: (1) the Authority’s procurement of RECs from NYSERDA in accordance with NYSERDA procedures and/or the CES Order; (2) the Authority’s procurement of RECs from available REC markets; (3) the Authority’s procurement of RECs from sources other than those identified in items (1) and (2) of this definition, including through a procurement process adopted by the Authority; and/or (4) any other measure that the PCS authorizes a Load Serving Entity to implement for the purpose of meeting the applicable Mandatory Minimum Percentage Proportion.

“Renewable Energy Credit” or “REC” refers to a qualifying renewable energy credit as described in the CES Order.

SCHEDULE E

“RES Compliance Program” means a program or initiative that the Authority has adopted for the purpose of meeting the RES for the load that the Authority serves under the Recharge New York Power program as authorized in the Power Authority Act.

“Renewable Energy Standard” or “RES” means the Renewable Energy Standard adopted by the State in the CES Order.

“State Energy Plan” means the 2015 New York State Energy Plan as amended from time to time.

“Total Monthly RNY Load” has the meaning provided in Section II.3.b of this Schedule E.

“Total Monthly REC Costs” has the meaning provided in Section II.3.b of this Schedule E.

II. MONTHLY REC CHARGE

1. Notwithstanding any other provision of the Agreement, or any provision of Service Tariff No. RNY-1 or the Rules, the Customer shall be subject to a Monthly REC Charge as provided in this Schedule E. The Monthly REC Charge is in addition to all other charges, fees and assessments provided in the Agreement, Service Tariff No. RNY-1 and the Rules. By accepting Electric Service under the Agreement, the Customer agrees to pay the Monthly REC Charge.
2. The Monthly REC Charge is part of a RES Compliance Program that the Authority has adopted for the purpose of complying with the CES and Tier 1 of the RES and implementing the RNY power program in a manner that is consistent with the New York State Energy Plan, pursuant to which the Authority will invest in new renewable generation resources to serve its RNY Power customers. Such investments will be made through the procurement of RECs through REC Compliance Measures in quantities that are intended to address the annual Mandatory Minimum Percentage Proportions as applied by the Authority to the total RNY Power load that the Authority will serve each calendar year (the “Annual REC Percentage Target”) for the purpose of ultimately meeting the RES.
3. The Monthly REC Charge, which is intended to recover from the Customer costs that the Authority incurs for implementing REC Compliance Measures that are attributable to the Customer’s RNY Power load served under this Agreement, will be determined and assessed to the Customer as follows:
 - a. The Authority shall have the right, for each calendar year to implement such REC Compliance Measures as it determines in its discretion to be appropriate for the purpose of meeting the Annual REC Percentage Target for the total RNY Power load that it will serve during such calendar year.

SCHEDULE E

- b. The Authority will, for each month of each calendar year, calculate the total costs (“Total Monthly REC Costs”) that the Authority has incurred or estimates that it will incur from implementing RES Compliance Measures for the purpose of meeting the Annual REC Percentage Target for the total RNY Power kilowatt-hour load for the month (“Total Monthly RNY Load”). The Total Monthly REC Costs may be calculated based on forecasts of the Total Monthly RNY Load that the Authority expects to serve for the month, or on a lagged basis based on the actual Total Monthly RNY Load that the Authority served for the month.
- c. Each month, the Authority will assess to the Customer, as a Monthly REC Charge, which will represent the Customer’s share of the Total Monthly REC Costs assessed to the Total Monthly RNY Load. The Monthly REC Charge will be assessed as the proportion of the Customer’s total kilowatt-hours load served by the Authority for such month to the Total Monthly RNY Load served by the Authority for such month, provided, however, that:
 - i. the Monthly REC Charge to the Customer shall not include any costs associated with the Authority’s inability to collect the Monthly REC Charge from other Authority customers; and
 - ii. the effective per-MWh rate of the Monthly REC Charge to the Customer averaged over the REC Program Year to which the Annual REC Percentage Target applies shall not exceed the per-MWh rate of a Monthly REC Charge based on NYSERDA’s published REC price for the REC Program Year.
- 4. The Authority may, in its discretion, include the Monthly REC Charge as part of the monthly bills for Electric Service as provided for in the Agreement, or bill the Customer for the Monthly REC Charge pursuant to another Authority-established procedure.
- 5. The Authority will, at the conclusion of each calendar year in which it assesses a Monthly REC Charge, conduct a reconciliation process based on the actual costs that it incurred for REC Compliance Measures and actual load served for the year, compared with cost or load estimates or forecasts, if any, that the Authority used to calculate the Customer’s Monthly REC Charges during the year. The Authority will issue a credit, or an adjusted final charge for the year, as appropriate, based on the results of such reconciliation process. Any such final charge shall be payable within the time frame applicable to the Authority’s bills for Electric Service under this Agreement or pursuant to any other procedure established by the Authority pursuant to Section II.4 of this Schedule E.
- 6. Notwithstanding the provisions of Section II.3 of this Schedule E, if Electric Service for the Allocation is commenced after the Authority has implemented REC Compliance Measures for the year in which such Electric Service is commenced, and as a result the Customer’s load cannot be accounted for in such REC Compliance Measures, the Authority may in its discretion implement separate REC Compliance Measures in order to meet the Annual REC Percentage Target for Customer’s load for the year, and bill the Customer for the costs associated with such separate REC Compliance Measures.

SCHEDULE E

7. Nothing in this Schedule E shall limit or otherwise affect the Authority's right to charge or collect from the Customer, any rate, charge, fee, assessment, or tax provided for under any other provision of the Agreement, or any provision of Service Tariff No. RNY-1 or the Rules.

III. ALTERNATIVE REC COMPLIANCE PROGRAM

Nothing in this Schedule E shall be construed as preventing the Parties from entering into other agreements for an alternative arrangement for the Authority to meet the Annual REC Percentage Target with respect to the Customer's Allocation, alternative REC compliance programs and cost allocation mechanisms, in lieu of the Monthly REC Charge provided in this Schedule E.

EXHIBIT 1

[This copy of Service Tariff No. RNY-1 as of the date of execution of the Agreement is provided for information purposes only, and Service Tariff No. RNY-1 is subject to revision by the Authority from time-to-time]



POWER AUTHORITY OF THE STATE OF NEW YORK
30 SOUTH PEARL STREET
ALBANY, NY 12207

Schedule of Rates for Sale of Recharge New York Power
(Direct Sale)

Service Tariff No. RNY-1

TABLE OF CONTENTS

General Information	Leaf No.
I. Applicability	3
II. Frequently Used Abbreviations and Terms	3
III. Monthly Zonal Base Rates and Related Matters	6
A. Monthly Zonal Base Rates.....	6
B. Monthly Zonal Base Rate Components.....	6
1.Preservation Power Price Component.....	6
2.NYISO Transmission and Related Charges Component	6
3.Capacity Component.....	7
4.Distribution Losses Component	7
5.Market Energy Component	7
6.Bad Debt Risk Component.....	8
C. Other Charges	8
1.Minimum Demand Charge.....	8
2.Taxes.....	8
3.Curtailments and Substitute Energy.....	8
D. New Charges.....	8
E. Delivery Charges.....	9
F. Estimated Billing.....	9
G. Energy Charge Adjustment.....	9
H. Adjustments to Charges.....	10
I. Periodic Rate Adjustment Process	10
IV. General Provisions	11
A. Character of Service	11
B. Availability of Energy	11
C. Delivery of RNY Power	11
D. Billing and Billing Methodology	12
E. Rendition and Payment of Bills	12
F. Conflicts.....	13

Schedule of Rates for Sale of Recharge New York Power

I. Applicability

To direct sales of Recharge New York Power to a Customer for firm Electric Service.

II. Frequently Used Abbreviations and Terms

- ECA Energy Cost Adjustment
- EDL New York Economic Development Law
- kW kilowatt(s)
- kWh kilowatt-hour(s)
- NYISO New York Independent System Operator, Inc. or any successor organization
- OATT NYISO Open Access Transmission Tariff
- PRAP Periodic Rate Adjustment Process
- PAL New York Public Authorities Law
- RNY Recharge New York
- ROS Rest of State
- RY Rate Year
- UCAP Unforced Capacity

Accepted Allocation: That portion of the Awarded Allocation the Customer has elected to accept and purchase from the Authority.

Agreement: An executed agreement between the Authority and a Customer setting forth the terms and conditions applicable to the allocation and sale of RNY Power to the Customer, including an agreement entitled “Agreement for the Sale of Recharge New York Power and Energy.”

Authority: The Power Authority of the State of New York, a corporate municipal instrumentality and a political subdivision of the State of New York created pursuant to Chapter 772 of the New York Laws of 1931 and existing and operating under Title 1 of Article 5 of the PAL, also known as the “New York Power Authority” and “NYPA.”

Awarded Allocation: The amount of RNY Power awarded to the Customer by the Authority, which consists of equal amounts of RNY Hydropower and RNY Market Power.

Billing Demand: This term has the meaning provided for in Section IV.D of this Service Tariff.

Billing Energy: This term has the meaning provided for in Section IV.D of this Service Tariff.

Billing Period: Any period of approximately thirty (30) days, generally ending with the last day of each calendar month but subject to the billing cycle requirements of the local electric utility in whose service territory the Customer’s Facility receiving the Accepted Allocation is located.

Contract Demand: The amount of RNY Power, not to exceed the Customer’s Accepted Allocation, allocated to the Customer which the Customer agrees to take and pay for in accordance with the Agreement. The Contract Demand shall equal the Accepted Allocation.

Customer: A RNY Blended Customer or RNY Hydropower Customer.

Electric Service: The power and energy provided to the Customer in accordance with the Agreement, this Service Tariff and the Rules.

Eligible Applicant: This term has the meaning provided for in EDL § 188-a.

Facility: The Customer's place of business specified in the Agreement that will receive or is receiving the Accepted Allocation.

Firm Energy: Firm Hydro Energy and Firm Market Energy (kWh) associated with Firm Power.

Firm Hydro Energy: Firm energy (kWh) associated with Firm Hydro Power.

Firm Hydro Power: Capacity (kW) that is intended to be always available from the Hydro Project subject to the curtailment provisions set forth in this Service Tariff and the Agreement. Firm Hydro Power does not include peaking power.

Firm Market Energy: Firm energy (kWh) associated with Firm Market Power supplied by Authority to the Customer.

Firm Market Power: Capacity (kW) that is intended to be always available from market sources and/or the Authority's non-Hydro Project-based resources as determined to be available for such use by the Authority.

Firm Power: Firm RNY Hydropower and Firm RNY Market Power.

Hydro Project: The Authority's St. Lawrence-FDR Power Project, FERC Project No. 2216 and/or the Authority's Niagara Power Project, FERC Project No. 2000.

Load Serving Entity or LSE: This term has the meaning provided for in the Agreement.

Minimum Demand Charge: This term has the meaning provided for in Section III.C.1 of this Service Tariff.

NYISO Tariffs: The tariffs of the NYISO, including the NYISO OATT, as such tariffs are amended and in effect from time to time.

PP Service Tariff No. 10: The Authority's service tariff denominated as "Schedule of Rates for Sale of Firm Power to Preservation Power Customers, Service Tariff No. 10," as amended from time to time by the Authority.

Rate Year or RY: The July Billing Period through the June Billing Period of the following year, beginning July 2012.

Recharge New York Power or RNY Power: Firm Power and Firm Energy the Authority is authorized to allocate and sell to Eligible Applicants in accordance with PAL § 1005(13-a) and EDL § 188-a.

RNY Blended Customer: An Eligible Applicant who has been awarded an allocation of RNY Power from the Authority and who has elected to accept and purchase RNY Hydropower and RNY Market Power from the Authority. In such case, the Customer's Accepted Allocation shall be comprised of 50 percent RNY Hydropower and 50 percent RNY Market Power.

RNY Hydro Customer: An Eligible Applicant who has been awarded an allocation of RNY Power from the Authority and who has elected to accept and purchase only RNY Hydropower from the Authority.

RNY Hydropower: This term has the same meaning as "recharge New York hydropower" as defined in PAL § 1005(13-a)(b), and further refers to the hydropower and energy components of a RNY Power allocation made to a RNY Hydro Customer or a RNY Blended Power Customer.

RNY Market Power: This term has the same meaning as "recharge New York market power" as defined in PAL § 1005(13-a)(b), and further refers to the market power and energy components of a RNY Power allocation made to a RNY Blended Power Customer.

Rules: The Authority's rules and regulations set forth in Chapter X of Title 21 of the Official Compilation of Codes, Rules and Regulations of the State of New York as may be modified from time to time by the Authority.

Service Tariff: This service tariff, denominated as "Schedule of Rates for Sale of Recharge New York Power (Direct Sale), Service Tariff No. RNY-1," as amended from time to time by the Authority.

Substitute Energy: Energy the Authority procures and sells to the Customer to replace RNY Hydropower that would otherwise have been sold to the Customer but for a curtailment made in accordance with the Agreement and this Service Tariff.

Take Down: The portion of the Accepted Allocation the Customer requests to be scheduled for a specific period as provided for in the Agreement.

Taxes: This term has the meaning provided for in Section III.C.2 of this Service Tariff

Zones: Geographical regions within New York State (sometimes referred to as "load zones" or "energy regions") designated by the NYISO and identified by letter (A-K) that are used to facilitate energy transactions and administration of the State's power grid.

Additional terms are defined in the text of this Service Tariff.

Unless otherwise indicated, all other capitalized terms and abbreviations used but not defined in this Service Tariff shall have the meaning as set forth in the Agreement.

III. Monthly Zonal Base Rates and Related Matters

A. Monthly Zonal Base Rates

Subject to the other provisions of this Service Tariff, the monthly zonal base rates to be charged to the Customer by the Authority based on the location (i.e., Zone) of its Facility shall be as follows:

RNY Hydro Customer		
Zones	Billing Demand (\$/kW)	Billing Energy (\$/kWh)
A-E	7.90	0.02124
F	7.90	0.03192
G-I	7.90	0.03834
J	7.90	0.04518
K	7.90	0.01932

RNY Blended Customer		
Zones	Billing Demand (\$/kW)	Billing Energy (\$/kWh)
A-E	3.95	0.03112
F	3.95	0.04375
G-I	3.95	0.05410
J	3.95	0.06126
K	3.95	0.05913

B. Monthly Zonal Base Rate Components

The monthly zonal base rates for RNY Hydro Customers referenced in Section III.A above consist of the following components, which are detailed below: (1) Preservation Power Price Component; (2) NYISO Transmission and Related Charges Component; (3) Capacity Component (for Zones G, H, I, J and K only); and (4) Distribution Losses Component.

The monthly zonal base rates for RNY Blended Customers include the RNY Hydro Customer rate components listed in the preceding sentence and the following additional components which are detailed below: (1) Market Energy Component; (2) Capacity Component (for all Zones); and (3) Bad Debt Risk Component.

The following is a description of the monthly zonal base rate components:

1. Preservation Power Price Component

This component consists of the rate the Authority charges for Preservation Power as set in accordance with Section III.A of the Authority's PP Service Tariff No. 10.

2. NYISO Transmission and Related Charges ("NYISO Charges") Component

This component consists of the Authority's estimated costs for NYISO Charges for services provided by the NYISO pursuant to NYISO Tariffs, NYISO-related agreements and NYISO procedures associated with the Authority's provision of Electric Service to the Customer. The NYISO Charges that will be accounted for in the monthly zonal base rates include:

- a. Charges for Ancillary Services 1 through 6 and any new ancillary services as may be provided in accordance with NYISO Tariffs;
- b. Transmission Usage Charges ("TUC") which are Marginal Losses and Congestion costs;
- c. The New York Power Authority "Transmission Adjustment Charge" or "NTAC";

- d. NYISO wide uplift as provided for in the NYISO Tariffs;
- e. Any and all other charges, assessments, or other amounts associated with delivery of RNY Power sold to Customers by the Authority, or otherwise associated with the Authority's responsibilities as a Load Serving Entity for Customers, that the NYISO assesses on the Authority under the provisions of the OATT or under other applicable NYISO Tariffs; and
- f. Any charges assessed on the Authority with respect to the provision of Electric Service to Customers for facilities needed to maintain reliability and incurred in connection with the NYISO's Comprehensive System Planning Process (or similar reliability-related obligations incurred by the Authority with respect to Electric Service to the Customer), applicable tariffs, or required to be paid by the Authority in accordance with law, regardless of whether such charges are assessed by the NYISO or another third party.

3. Capacity Component

This component consists of the Authority's estimated costs to meet the NYISO's capacity requirements. This is currently expressed by the NYISO as the Unforced Capacity or "UCAP" obligation. The UCAP obligation is inclusive of any adjustments for reserves needed to meet the installed reserve margin as required by the NYISO.

For RNY Hydro Customer loads, except for those in Zones G, H, I, J and K, capacity will be secured through the Hydro Project. For RNY Hydro Customer loads in Zones G, H, I, J and K only, locational capacity requirements as required by the NYISO will be secured through market purchases or any other means as determined to be most appropriate by the Authority in its sole discretion. The remaining capacity (ROS capacity) will be secured through the Hydro Project.

For RNY Blended Customer loads, capacity will be secured through a combination of sources consisting of the Hydro Project, bilateral contracts, NYISO auctions, or any other means as determined to be most appropriate by the Authority in its sole discretion.

4. Distribution Losses Component

This component consists of the Authority's estimated costs associated with distribution losses of the local electric utility.

5. Market Energy Component

This component, applicable to monthly zonal base rates for RNY Blended Customers, reflects the Authority's forecast of prices for market purchases to be made by Authority on behalf of the Customer based on current and anticipated market conditions. The Authority intends to procure RNY Market Power using short and long-term purchases, including purchases from the NYISO Day-Ahead Market and/or Real-Time Market (each term as provided for in the NYISO Tariffs), and through requests for proposals to the extent the Authority deems them appropriate. Financial hedging instruments may be used for the purposes of mitigating the risk in price movements. The Authority will include the costs of any financial products used to hedge these purchases. Purchases of RNY Market Power will be made in whichever portfolio combination the Authority deems to be appropriate in its sole discretion.

6. Bad Debt Risk Component

This component accounts for risk of loss to the Authority from bad debt associated with the sale of RNY Power across the RNY Power Program.

C. Other Charges

The monthly zonal base rates do not reflect any of the charges discussed in this Section III.C (collectively, "Other Charges"). The Customer shall be responsible for payment of such Other Charges as a separate charge from the monthly zonal base rates to the extent they apply to such Customer.

1. Minimum Demand Charge

The Customer shall be subject to a monthly minimum billing demand charge calculated as follows. If in any given month Customer's monthly demand usage is less than 75 percent of its Contract Demand, a minimum demand charge equal to 75 percent of the Customer's Contract Demand (or if the Take Down is less than the Contract Demand, 75 percent of the Take Down), times the applicable demand rate shall apply for that month. Such minimum monthly charge shall be in addition to all other charges provided for in this Service Tariff, including but not limited to Energy Billing and Other Charges as provided for in this Service Tariff.

2. Taxes

The Authority will charge and collect from the Customer all local, state and federal taxes, assessments or other charges mandated by local, state or federal agencies or authorities that are levied on the Authority or that the Authority is required to collect from the Customer ("Taxes") if and to the extent such Taxes are not recovered by the Authority pursuant to another provision of this Service Tariff.

3. Curtailments and Substitute Energy

Firm Hydro Power and Firm Hydro Energy are subject to curtailment as provided for in the Agreement and Section IV.B of this Service Tariff. The Authority shall provide Substitute Energy to the Customer, and the Customer shall pay the Authority for Substitute Energy, in accordance with the Agreement and Section IV.B of this Service Tariff.

D. New Charges

The Customer shall be responsible for payment of any and all new costs or charges incurred by the Authority in connection with its provision of Electric Service to the Customer, including but not limited to, charges and costs incurred for supplying RNY Hydropower and RNY Market Power, and any new NYISO Charges as may be defined and applied in any NYISO Tariffs, NYISO-related agreements and NYISO procedures from time to time (collectively, "New Charges"). The Authority, in its sole discretion, may include any such New Charges in the monthly zonal base rates or the Energy Charge Adjustment, or bill the Customer separately for such New Charges.

E. Delivery Charges

The Customer shall be solely responsible for paying its local electric utility for all delivery service charges associated with RNY Power. Should the Authority incur any charges from the local electric utility associated with such delivery service, the Customer shall reimburse the Authority for all such charges.

F. Estimated Billing

If the Authority, in its sole discretion, determines that it lacks reliable data on the Customer's actual demand and/or energy usage for a Billing Period during which the Customer receives Electric Service from the Authority, the Authority shall have the right to render a bill to the Customer for such Billing Period based on estimated demand and estimated usage ("Estimated Bill").

For the purpose of calculating a Billing Demand charge for an Estimated Bill, the demand charge will be calculated based on an average of the Customer's Billing Demand (kW) values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated demand (kW) value for the Estimated Bill will equal the Customer's Takedown (kW) amount.

For the purpose of calculating a Billing Energy charge for an Estimated Bill, the energy charge will be calculated based on an average of the Customer's Billing Energy (kWh) values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated energy value (kWh) will be equal to the Takedown (kW) amount at 70 percent load factor for that Billing Period.

If data indicating the Customer's actual demand and usage for any Billing Period in which an Estimated Bill was rendered is subsequently provided to the Authority, the Authority will make necessary adjustments to the corresponding Estimated Bill in accordance with Section III.H of this Service Tariff and, as appropriate, render a revised bill (or provide a credit) to the Customer.

The provisions of Section IV.E of this Service Tariff shall apply to Estimated Bills.

The Authority's discretion to render Estimated Bills is not intended to limit the Authority's rights under the Agreement or otherwise regarding Metering Arrangements.

G. Energy Charge Adjustment

As described above in Section III.B of this Service Tariff, one or more of the monthly zonal base rate components are based on estimates made by the Authority. Charges to the Customer shall be subject to an Energy Charge Adjustment process ("ECA") administered by the Authority.

Pursuant to the ECA, charges for Electric Service shall be subject to adjustment (i.e., increase or decrease) when the Authority determines that actual costs vary from the estimates used by the Authority to formulate the monthly zonal base rate components.

H. Adjustments to Charges

In addition to any other adjustments provided for in this Service Tariff, in any Billing Period, the Authority may make appropriate adjustments to billings and charges to address such matters as billing and payment errors, the receipt of actual, additional, or corrected data concerning Customer energy or demand usage.

I. Periodic Rate Adjustment Process

Monthly zonal base rates for RNY Hydro Customers and RNY Blended Customers, including the monthly zonal base rate components listed in Section III.B of this Service Tariff, shall be subject to adjustment in accordance with a Periodic Rate Adjustment Process ("PRAP") that will establish new monthly zonal base rates for such Customers. It is anticipated that PRAP will occur annually and establish new rates that will be effective beginning on the first day of the next succeeding Rate Year, provided however, the Authority may conduct the PRAP more or less frequently to establish new rates with a different effective date as determined to be advisable by the Authority considering market conditions and other appropriate factors.

As noted above in Section III.B of this Service Tariff, the Preservation Power Price Component of the RNY Hydro Customer and RNY Blended Customer rates is based on the Preservation Power Rate as established in accordance with Section III.A of the PP Service Tariff No.10. The Preservation Power Rate has been established for the period through June 2014. Commencing with the rate year beginning July 2014, and for each rate year thereafter, the Preservation Power Rate is subject to an Annual Adjustment Factor as provided for in Sections V.A.1, V.A.2, V.A.4 and V.B of the PP Service Tariff No.10.

Unless the Authority determines such notice to be impracticable, the Authority will provide the Customer with not less than thirty (30) days written notice of any adjustment of the rates made in accordance with the PRAP.

IV. General Provisions

A. Character of Service

Alternating current; sixty cycles, three-phase.

B. Availability of Energy

1. Subject to Section IV.B.2 of this Service Tariff, the Authority shall provide to the Customer in any Billing Period Firm Energy associated with Firm Power.
2. If, as a result of reduced water flows caused by hydrologic conditions, there is insufficient energy from the Hydro Projects to supply the full power and energy requirements of the Authority's firm power customers served from the Hydro Projects, curtailments in the amount of Firm Power and Firm Energy to which the Customer is entitled as RNY Hydropower under the Agreement will be applied on a pro rata basis to all firm power and firm energy customers served by the Hydro Projects. Reductions as a percentage of the otherwise required firm power and firm energy sales will be the same for all firm power and firm energy customers served by the Hydro Projects. The provision of RNY Market Power, if any, sold to the Customer by the Authority is not subject to curtailment.
3. The Authority will provide Substitute Energy to the Customer to replace the RNY Hydropower that would otherwise have been supplied under this Agreement but for the curtailment. For each kilowatt-hour of Substitute Energy supplied by the Authority, the Customer shall pay the Authority directly for: (a) the market cost of the Substitute Energy; and (b) all costs, including but not limited to any NYISO Charges and Taxes, the Authority incurs in connection with the provision of Substitute Energy.
4. The Authority will give the Customer advance notice of forecasted shortfalls in Firm Power and Firm Energy curtailments which will advise the Customer of the forecasted shortfall of Firm Power and Firm Energy, the period to which the forecast applies (usually a Billing Period), and the Customer's anticipated share of the forecasted shortfall. After the Billing Period to which the notice applies, the Authority will determine after the fact the actual shortfall and make any appropriate adjustments to charges and billings to the Customer in accordance with the rates provided for in this Service Tariff.
5. The Authority is under no obligation to supply and will not supply to the Customer in later Billing Periods any curtailed RNY Hydropower.

C. Delivery of RNY Power

The Customer's local electric utility shall be responsible for delivering RNY Power to the Customer. The Authority shall have no responsibility for delivering any RNY Power to the Customer.

For the purpose of this Service Tariff, Firm Power and Firm Energy will be deemed to be offered when the Authority is able to supply Firm Power and Firm Energy to the Authority's designated NYISO load bus. If despite such offer, there is a failure of delivery caused by the Customer, NYISO or local electric utility, such failure will not be subject to a billing adjustment pursuant to Section 454.6(d) of the Rules.

D. Billing and Billing Methodology

Unless otherwise specified in the Agreement, the following provisions will apply:

1. The amount of energy that will be used by the Authority for Customer billing purposes will be determined based on the methodology provided for in any agreements between the Authority and the Customer's local electric utility regarding the delivery of RNY Power.
2. **Billing Demand.** The Billing Demand charged by the Authority to each Customer will be the highest 30-minute integrated demand during each Billing Period recorded on the Customer's meter multiplied by a percentage based on the methodology provided for in any contract between the Authority and the Customer's local electric utility for delivery of RNY Power. Billing Demand may not exceed the amount of the Contract Demand.
3. **Billing Energy.** The kilowatt-hours charged by the Authority to each Customer will be the total number of kilowatt-hours recorded on the Customer's meter for the Billing Period multiplied by a percentage based on the methodology provided for in any contract between the Authority and the Customer's local electric utility for delivery of RNY Power.

E. Rendition and Payment of Bills

1. The Authority will render bills to the Customer for Electric Service on or before the fifteenth (15th) business day of the month for charges due for the previous Billing Period. Bills will reflect the amounts due and owing, and are subject to adjustment as provided for in this Agreement, Service Tariff No. RNY-1 and the Rules. Unless otherwise agreed to by the Authority and the Customer in writing, the Authority shall render bills to the Customer electronically.
2. Payment of bills by the Customer shall be due and payable by the Customer within twenty (20) days of the date the Authority renders the bill.
3. Except as otherwise agreed by the Authority in writing, if the Customer fails to pay any bill when due an interest charge of two percent of the amount unpaid will be added thereto as liquidated damages, and thereafter, as further liquidated damages, an additional interest charge of one and one-half percent of the sum unpaid shall be added on the first day of each succeeding Billing Period until the amount due, including interest, is paid in full.
4. Unless otherwise agreed to by the Authority and the Customer in writing, in the event the Customer disputes any item of a bill rendered by Authority, the Customer shall pay such bill in the time provided for by this Agreement, and adjustments, if necessary, will be made thereafter.
5. If at any time after commencement of Electric Service the Customer fails to make complete payment of any two (2) bills for Electric Service when such bills become due pursuant to Agreement, the Authority shall have the right to require that the Customer deposit with the Authority a sum of money in an amount equal to all charges that would be due under this Agreement for Electric Service for two (2) consecutive calendar months as estimated by the Authority. Such deposit will be deemed security for the payment of unpaid bills and/or other claims of the Authority against the Customer upon termination of Electric Service. The failure or refusal of the Customer to provide the deposit within thirty (30) days of a request for such deposit will be grounds for the Authority in its sole discretion to suspend Electric Service to the Customer or terminate this Agreement.

F. Conflicts

In the event of any inconsistencies, conflicts, or differences between the provisions of this Service Tariff and the Rules, the provisions of the Service Tariff will govern. In the event of any inconsistencies, conflicts or differences between the Service Tariff and any provisions of the Agreement, the provisions of the Agreement will govern.

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
1	3M Company	Tonawanda	Erie	Western New York	NGRID	Manufacturer of cellulose sponges	1,750	1,750	349	\$35,000,000	7
2	Adirondack Beverages Corp.	Scotia	Schenectady	Capital District	NGRID	Beverage manufacturer & distributor	1,060	1,060	292	\$11,000,000	7
3	Air Techniques, Inc.	Melville	Suffolk	Long Island	LIPA	Manufacturer of dental products	330	330	195	\$6,500,000	7
4	Albany Molecular Research, Inc.	Rensselaer	Rensselaer	Capital District	NGRID	Pharmaceutical research organization	1,810	1,810	280	\$25,000,000	7
5	Albany Molecular Research, Inc.	Rensselaer	Rensselaer	Capital District	NGRID	Pharmaceutical research organization	136	136	19	\$500,000	7
6	Albany Molecular Research, Inc.	Albany	Albany	Capital District	NGRID	Pharmaceutical research organization	1,280	1,280	321	\$7,500,000	7
7	Albert Einstein College of Medicine, Inc.	Bronx	Bronx	New York City	CONED	Medical college	1,320	1,320	1,800	\$30,000,000	7
8	Allied Frozen Storage, Inc.	Cheektowaga	Erie	Western New York	NGRID	Frozen food storage facility	240	240	31	\$1,000,000	7
9	American Rock Salt Company LLC	Mt. Morris	Livingston	Finger Lakes	RGE	Distributor of rock salt	2,250	2,250	225	\$25,000,000	7
10	Anchor Glass Container Corporation	Elmira	Chemung	Southern Tier	NYSEG	Manufacturer of glass containers	6,630	6,630	239	\$44,000,000	7
11	Angion Biomedica Corp.	Uniondale	Nassau	Long Island	LIPA	Biopharmaceutical research & development	130	130	7	\$2,500,000	7
12	Anheuser-Busch, LLC	Baldwinsville	Onondaga	Central New York	NGRID	Manufacturer & distributor of malt beverages	8,090	8,090	384	\$13,500,000	7
13	Arch Chemicals, Inc.	Rochester	Monroe	Finger Lakes	RGE	Manufacturer of microbial control products	1,240	1,240	165	\$60,000,000	7
14	Ascension Industries Inc.	North Tonawanda	Niagara	Western New York	NGRID	Manufacturer of filtration equipment	76	76	125	\$1,000,000	7
15	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	Manufacturer of copper & brass strips	1,750	1,750	640	\$33,000,000	7
16	BAE Systems Information and Electronic Systems Integration Inc.	Greenlawn	Suffolk	Long Island	LIPA	Develops surveillance systems for military intelligence	1,250	1,250	600	\$11,000,000	7
17	Barnes & Noble, Inc.	Westbury	Nassau	Long Island	LIPA	Business center for bookstore retailer	670	670	184	\$83,000,000	7
18	Bestway Enterprises Inc.	Cortland	Cortland	Central New York	NGRID	Lumber treater & building products distributor	70	70	40	\$250,000	7
19	Blasch Precision Ceramics, Inc.	Albany	Albany	Capital District	NGRID	Manufacturer of ceramic & refractory components	246	246	102	\$3,000,000	7
20	BorgWarner Ithaca LLC	Ithaca	Tompkins	Southern Tier	NYSEG	Manufacturer of automotive components	3,500	3,500	1,200	\$76,200,000	7

New York Power Authority
Extension Recommendations - RNY Power Allocations for Retention Purposes (Large Businesses, Small Business, and/or NFP Corporations)

Exhibit "5d i-1b-B"
October 2, 2018

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
21	Broadridge Investor Communication Solutions, Inc.	Edgewood	Suffolk	Long Island	LIPA	Technology-driven financial solutions	2,400	2,400	1,713	\$30,677,200	7
22	Bronx-Lebanon Hospital Center	Bronx	Bronx	New York City	CONED	Hospital & healthcare center	2,146	2,146	1,065	\$1,027,614	7
23	Bronx-Lebanon Hospital Center	Bronx	Bronx	New York City	CONED	Hospital & healthcare center	2,146	2,146	2,713	\$10,264,057	7
24	Cascades Containerboard Packaging - New York City Inc.	Mechanicville	Saratoga	Capital District	NYSEG	Manufacturer of tissue paper	2,070	2,070	36	\$1,325,500	7
25	Cascades Containerboard Packaging - Niagara Falls Inc.	Niagara Falls	Niagara	Western New York	NGRID	Manufacturer of corrugated paper	2,990	2,990	137	\$11,000,000	7
26	Clarkson University	Potsdam	St. Lawrence	North Country	NGRID	Institution of higher education	1,466	1,466	784	\$35,000,000	7
27	Cliffstar LLC	Dunkirk	Chautauqua	Western New York	NGRID	Producer of private label juices & drinks	1,000	1,000	400	\$10,000,000	7
28	Codino's Foods, Inc.	Scotia	Schenectady	Capital District	NGRID	Manufacturer of frozen pasta products	310	310	35	\$300,000	7
29	Commitment 2000, Inc.	Buffalo	Erie	Western New York	NGRID	Manufacturer of flour tortillas & flat breads	126	126	78	\$750,000	7
30	Commodore Plastics, LLC	Bloomfield	Ontario	Finger Lakes	RGE	Manufacturer of foam packaging products	550	550	168	\$2,000,000	7
31	ConMed Corporation	Utica	Oneida	Mohawk Valley	NGRID	Manufacturer of surgical & medical instruments	1,440	1,440	556	\$4,000,000	7
32	Cooper Power Systems, LLC	Olean	Cattaraugus	Western New York	NGRID	Manufacturer of surge arrester products	620	620	120	\$7,000,000	7
33	Corelle Brands LLC	Corning	Steuben	Southern Tier	NYSEG	Manufacturer of kitchenware products	6,000	6,000	450	\$7,000,000	7
34	Currier Plastics, Inc	Auburn	Cayuga	Central New York	NYSEG	Manufacturer of plastic molded products	930	930	150	\$1,250,000	7
35	Dayton T. Brown, Inc.	Bohemia	Suffolk	Long Island	LIPA	Independent engineering & testing laboratory	100	100	170	\$3,000,000	7
36	Delphi Automotive Systems, LLC	West Henrietta	Monroe	Finger Lakes	RGE	Engineering center for automotive components	1,100	1,100	220	\$7,500,000	7
37	Derrick Corporation	Buffalo	Erie	Western New York	NYSEG	Manufacturer of separation technologies	960	960	420	\$10,000,000	7
38	Disc Graphics, Inc.	Hauppauge	Suffolk	Long Island	LIPA	Commercial printing & packaging services	650	650	150	\$5,000,000	7
39	Diversified Manufacturing, Inc.	Lockport	Niagara	Western New York	NYSEG	Manufacturer of industrial equipment	196	196	99	\$375,000	7
40	Dynabrade, Inc.	Clarence	Erie	Western New York	NYSEG	Manufacturer of abrasive power tools	176	176	160	\$1,500,000	7

New York Power Authority
Extension Recommendations - RNY Power Allocations for Retention Purposes (Large Businesses, Small Business, and/or NFP Corporations)

Exhibit "5d i-1b-B"
October 2, 2018

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
41	Eastern Forest Products, Inc.	Cobleskill	Schoharie	Mohawk Valley	NGRID	Manufacturer of finger joint boards	176	176	85	\$250,000	7
42	Eastern Niagara Hospital, Inc.	Lockport	Niagara	Western New York	NYSEG	Hospital & healthcare center	466	466	500	\$8,700,000	7
43	Eastman Machine Company	Buffalo	Erie	Western New York	NGRID	Manufacturer of fabric cutting machines	110	110	50	\$200,000	7
44	EG Industries, Inc.	Rochester	Monroe	Finger Lakes	RGE	Custom injection molder of thermoplastic materials	616	616	200	\$2,000,000	7
45	Empire Merchants, LLC	Long Island City	Queens	New York City	CONED	Wine & spirits distributor	220	220	592	\$250,000	7
46	Empire Merchants, LLC	Brooklyn	Kings	New York City	CONED	Wine & spirits distributor	676	676	535	\$250,000	7
47	Favorite Plastic Corp.	New York	Kings	New York City	CONED	Producer of polyethylene films	346	346	41	\$1,000,000	7
48	Felix Schoeller North America Inc.	Pulaski	Oswego	Central New York	NGRID	Digital imaging converting facility	506	506	200	\$850,000	7
49	Fieldbrook Foods Corporation	Dunkirk	Chautauqua	Western New York	NGRID	Manufacturer of ice cream products	780	780	550	\$20,000,000	7
50	Fitzpatrick and Weller, Inc.	Ellicottville	Cattaraugus	Western New York	NGRID	Manufacturer of lumber & wood components	476	476	98	\$1,952,000	7
51	Flexible Business Systems, Inc.	Hauppauge	Suffolk	Long Island	LIPA	IT support & technology consulting	46	46	15	\$6,000,000	7
52	Flower City Printing, Inc.	Rochester	Monroe	Finger Lakes	RGE	Commercial printing services	596	596	217	\$4,000,000	7
53	G & L Davis Meat Co., Inc.	North Syracuse	Onondaga	Central New York	NGRID	Manufacturer of sausages	140	140	100	\$500,000	7
54	Gary Plastic Packaging Corp.	Bronx	Bronx	New York City	CONED	Manufacturer of plastic boxes	926	926	525	\$100,000	7
55	GCT New York LP	Staten Island	Richmond	New York City	CONED	Marine cargo handling services	220	220	300	\$15,000,000	7
56	GE Aviation Systems LLC	Bohemia	Suffolk	Long Island	LIPA	Manufacturer of power supplies & battery chargers	470	470	250	\$5,000,000	7
57	General Mills Operations, LLC	Buffalo	Erie	Western New York	NGRID	Manufacturer of flour & mill feed products	500	500	94	\$7,500,000	7
58	Ginsberg's Institutional Foods, Inc.	Hudson	Columbia	Capital District	NGRID	Wholesale food distribution	276	276	257	\$1,250,000	7
59	Gorbel, Inc.	Victor	Ontario	Finger Lakes	RGE	Manufacturer of overhead handling solutions	280	280	250	\$350,000	7
60	Graphic Controls Acquisition Corp.	Buffalo	Erie	Western New York	NGRID	Manufacturer of medical devices & consumable products	310	310	275	\$1,400,000	7

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
61	Great Lakes Cheese of New York, Inc.	Adams	Jefferson	North Country	NGRID	Cheese production plant	950	950	118	\$3,000,000	7
62	Guardian Industries, LLC	Geneva	Ontario	Finger Lakes	NYSEG	Manufacturer of glass products	4,150	4,150	260	\$10,000,000	7
63	GUSC Energy Inc.	Rome	Oneida	Mohawk Valley	NGRID	Business & technology park	6,730	6,730	5,120	\$10,000,000	7
64	Harden Furniture, LLC	McConnellsville	Oneida	Mohawk Valley	NGRID	Manufacturer of residential & commercial furniture	1,250	1,250	175	\$400,000	7
65	Hardinge Inc.	Elmira	Chemung	Southern Tier	NYSEG	Manufacturer of precision machine tools	996	996	385	\$440,000	7
66	HealthAlliance Hospital Broadway Campus	Kingston	Ulster	Mid-Hudson	CHUD	Hospital & healthcare center	260	260	618	\$42,019,285	7
67	Hebeler LLC	Tonawanda	Erie	Western New York	NGRID	Manufacturer of industrial equipment	186	186	100	\$1,000,000	7
68	Henry Schein, Inc.	Melville	Suffolk	Long Island	LIPA	Distributor of dental supplies & equipment	1,040	1,040	1,370	\$4,000,000	7
69	HFW Industries, Incorporated	Buffalo	Erie	Western New York	NGRID	Manufacturer of industrial equipment	150	150	51	\$1,500,000	7
70	Hollowick, inc.	Manlius	Onondaga	Central New York	NGRID	Manufacturer of liquid candle & table lamps	126	126	48	\$2,500,000	7
71	Homogeneous Metals, Inc.	Clayville	Oneida	Mohawk Valley	NGRID	Manufacturer of superalloy metals & powders	340	340	248	\$20,000,000	7
72	HP Hood LLC	Oneida	Madison	Central New York	NGRID	Distributor & producer of dairy products	800	800	210	\$5,000,000	7
73	HP Hood LLC	Arkport	Steuben	Southern Tier	NYSEG	Distributor & producer of dairy products	1,100	1,100	112	\$250,000	7
74	HP Hood LLC	Vernon	Oneida	Mohawk Valley	NGRID	Distributor & producer of dairy products	846	846	95	\$5,000,000	7
75	Huhtamaki, Inc.	Fulton	Oswego	Central New York	NGRID	Conversion of paper to food packaging products	2,060	2,060	440	\$5,000,000	7
76	Imerys Wollastonite USA, LLC	Willsboro	Essex	North Country	NYSEG	Mining, milling, & treatment of Wollastonite mineral	1,400	1,400	70	\$6,000,000	7
77	Inficon, Inc.	East Syracuse	Onondaga	Central New York	NGRID	Manufacturer of technological instruments	250	250	255	\$7,000,000	7
78	International Wire Group, Inc.	Camden	Oneida	Mohawk Valley	NGRID	Manufacturer of various wire products	1,760	1,760	191	\$6,820,000	7
79	International Wire Group, Inc.	Cazenovia	Madison	Central New York	NGRID	Manufacturer of various wire products	90	90	57	\$460,000	7
80	International Wire Group, Inc.	Camden	Oneida	Mohawk Valley	NGRID	Manufacturer of various wire products	1,080	1,080	88	\$4,094,000	7

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
81	International Wire Group, Inc.	Jordan	Onondaga	Central New York	NYSEG	Manufacturer of various wire products	760	760	60	\$2,500,000	7
82	International Wire Group, Inc.	Camden	Oneida	Mohawk Valley	NGRID	Manufacturer of various wire products	496	496	18	\$520,000	7
83	International Wire Group, Inc.	Rome	Oneida	Mohawk Valley	NGRID	Manufacturer of various wire products	790	790	62	\$1,300,000	7
84	International Wire Group, Inc.	Williamstown	Oswego	Central New York	NGRID	Manufacturer of various wire products	1,100	1,100	159	\$4,182,000	7
85	Intrepid Museum Foundation	New York	New York	New York City	CONED	Military & maritime history museum	290	290	268	\$4,500,000	7
86	Irving Consumer Products, Inc.	Fort Edward	Washington	Capital District	NGRID	Manufacturer of household paper & diaper products	8,000	8,000	336	\$15,000,000	7
87	J H Rhodes Company, Inc.	Vernon	Oneida	Mohawk Valley	NGRID	Manufacturer of surface preparation materials	70	70	40	\$500,000	7
88	J.G.B. Enterprises, Inc.	Liverpool	Onondaga	Central New York	NGRID	Manufacturer of industrial hoses & accessories	120	120	200	\$250,000	7
89	Jamestown Advanced Products Corp.	Jamestown	Chautauqua	Western New York	NGRID	Manufacturer of campground equipment	270	270	70	\$250,000	7
90	John Hassall, LLC	Westbury	Nassau	Long Island	LIPA	Manufacturer of specialty metal fasteners	320	320	78	\$2,200,000	7
91	John T. Mather Memorial Hospital of Port Jefferson, New York, Inc.	Port Jefferson	Suffolk	Long Island	LIPA	Hospital & healthcare center	830	830	1,537	\$20,000,000	7
92	Johnson & Hoffman, LLC	Carle Place	Nassau	Long Island	LIPA	Manufacturer of metal stamping parts	196	196	63	\$1,500,000	7
93	Keymark Corporation	Fonda	Montgomery	Mohawk Valley	NGRID	Fabrication of aluminum extrusions	1,950	1,950	360	\$200,999	7
94	Kilian Manufacturing Corporation	Syracuse	Onondaga	Central New York	NGRID	Manufacturer of bearings & assemblies	266	266	170	\$1,500,000	7
95	Klein Steel Service Inc.	Rochester	Monroe	Finger Lakes	RGE	Metals supplier & processing center	250	250	165	\$3,900,000	7
96	Kraft Heinz Foods Company	Avon	Livingston	Finger Lakes	NGRID	Production of whipped toppings & packaged lunches	2,520	2,520	299	\$10,000,000	7
97	Kraft Heinz Foods Company	Lowville	Lewis	North Country	NGRID	Production of cream cheese products	2,476	2,476	391	\$2,600,000	7
98	Kraft Heinz Foods Company	Walton	Delaware	Southern Tier	NYSEG	Production of sour cream & cottage cheese products	1,210	1,210	100	\$4,000,000	7
99	Kreher's Farm Fresh Eggs, LLC	Clarence	Erie	Western New York	NGRID	Egg farm	276	276	87	\$1,000,000	7
100	Kreher's Sunrise Farm, LLC	Basom (Town of Alabama)	Genesee	Finger Lakes	NGRID	Egg farm	176	176	27	\$3,000,000	7

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
101	Lafarge North America, Inc.	Ravena	Albany	Capital District	NGRID	Cement manufacturing plant	10,000	10,000	136	\$299,999	7
102	Land O'Lakes, Inc.	Hicksville	Nassau	Long Island	LIPA	Manufacturer of pudding & snack products	810	810	190	\$6,000,000	7
103	Linde LLC	Feura Bush	Albany	Capital District	NGRID	Industrial gas supplier	6,750	6,750	25	\$63,000,000	7
104	Lydall Performance Materials, Inc.	Green Island	Albany	Capital District	NGRID	Manufacturer of insulation & filtration materials	1,340	1,340	80	\$3,000,000	7
105	MACOM Technology Solutions Inc.	Ithaca	Tompkins	Southern Tier	NYSEG	Supplier of indium phosphide lasers	186	186	101	\$5,000,000	7
106	Mahle Industries Incorporated	Amherst	Erie	Western New York	NGRID	Manufacturer of automotive air conditioning compressors	250	250	86	\$5,999,490	7
107	Maines Paper & Food Service, Inc.	Conklin	Broome	Southern Tier	NYSEG	Distribution of food & paper products	610	610	1,050	\$10,000,000	7
108	Margaretville Memorial Hospital	Margaretville	Delaware	Southern Tier	NYSEG	Hospital & healthcare center	40	40	75	\$750,000	7
109	Markin Tubing, LP	Wyoming	Wyoming	Finger Lakes	NGRID	Manufacturer of welded steel tubing	1,100	1,100	110	\$3,000,000	7
110	Matt Industries Inc.	Syracuse	Onondaga	Central New York	NGRID	Commercial printing services	146	146	165	\$2,000,000	7
111	McLane/Eastern, Inc.	Baldwinsville	Onondaga	Central New York	NGRID	Wholesale grocery distribution	416	416	643	\$7,500,000	7
112	Metal Container Corporation	New Windsor	Orange	Mid-Hudson	CHUD	Manufacturer of aluminum cans for beverages	3,500	3,500	180	\$2,500,000	7
113	Midstate Spring, Inc.	Syracuse	Onondaga	Central New York	NGRID	Manufacturer of precision springs & wire	140	140	61	\$500,000	7
114	Modell's II, Inc.	Bronx	Bronx	New York City	CONED	Warehouse & distribution center	216	216	145	\$500,000	7
115	Mod-Pac Corp.	Buffalo	Erie	Western New York	NGRID	Manufacturer of folding cartons	860	860	330	\$10,000,000	7
116	Mohawk Ltd.	Chadwicks	Oneida	Mohawk Valley	NGRID	Electronic repairs & calibration services	46	46	40	\$25,000	7
117	Moog Inc.	Elma	Erie	Western New York	NYSEG	Manufacturer of motion & fluid controls	1,116	1,116	2,549	\$120,000,000	7
118	Mountainside Residential Care Center	Margaretville	Delaware	Southern Tier	NYSEG	Long-term residential care facility	40	40	75	\$750,000	7
119	MPM Silicones, LLC	Waterford	Saratoga	Capital District	NGRID	Manufacturer of silicone & silicone derivatives	10,000	10,000	1,000	\$55,000,000	7
120	Munson Machinery Company, Inc.	Utica	Oneida	Mohawk Valley	NGRID	Manufacturer of size reduction equipment	110	110	30	\$250,000	7

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
121	Nathan Littauer Hospital Association	Gloversville	Fulton	Mohawk Valley	NGRID	Hospital & healthcare center	330	330	802	\$7,500,000	7
122	National Pipe & Plastics, Inc.	Endicott	Broome	Southern Tier	NYSEG	Manufacturer of pipes & fittings	1,250	1,250	150	\$4,000,000	7
123	Niagara Falls Memorial Medical Center	Niagara Falls	Niagara	Western New York	NGRID	Hospital & medical center	566	566	965	\$6,265,637	7
124	Norlite, LLC	Cohoes	Albany	Capital District	NGRID	Manufacturer of stone aggregate	996	996	65	\$20,000,000	7
125	North Hudson Woodcraft Corporation	Dolgeville	Herkimer	Mohawk Valley	NGRID	Manufacturer of various wood products	280	280	49	\$250,000	7
126	Norwich Pharmaceuticals, Inc.	Norwich	Chenango	Southern Tier	NYSEG	Manufacturer of pharmaceutical products	450	450	300	\$25,000,000	7
127	NYSE Holdings LLC	New York City	New York	New York City	CONED	Operation of various stock exchanges	1,686	1,686	400	\$10,000,000	7
128	Oldcastle BuildingEnvelope, Inc.	Hauppauge	Suffolk	Long Island	LIPA	Glass fabrication facility	1,300	1,300	109	\$4,000,000	7
129	Owens-Brockway Glass Container Inc.	Auburn	Cayuga	Central New York	NYSEG	Manufacturer of glass containers	3,500	3,500	257	\$20,000,000	7
130	Pactiv LLC	Canandaigua	Ontario	Finger Lakes	RGE	Manufacturer of food packaging products	7,000	7,000	700	\$3,000,000	7
131	Pall Corporation	Cortland	Cortland	Central New York	NGRID	Manufacturer of filtration products	1,770	1,770	500	\$10,000,000	7
132	Perrone Leather, LLC	Fultonville	Fulton	Mohawk Valley	NGRID	Manufacturer of performance leathers & textiles	80	80	100	\$900,000	7
133	Pivot Punch Corporation	Lockport	Niagara	Western New York	NGRID	Manufacturer of precision tools & components	176	176	64	\$1,000,000	7
134	Pratt Paper (NY), Inc.	Staten Island	Richmond	New York City	CONED	Recycled paper & packaging solutions	10,000	10,000	270	\$15,000,000	7
135	Precious Plate, Inc.	Niagara Falls	Niagara	Western New York	NGRID	Electroplating services	100	100	15	\$8,500,000	7
136	Quad/Graphics, Inc.	Saratoga Springs	Saratoga	Capital District	NGRID	Commercial printing services	4,246	4,246	620	\$1,000,000	7
137	Qubica AMF Worldwide, LLC	Lowville	Lewis	North Country	NGRID	Manufacturer of bowling pins	470	470	80	\$750,000	7
138	Queensboro Farm Products, Inc.	Canastota	Madison	Central New York	NGRID	Production of dairy products	390	390	30	\$665,000	7
139	Retlif Incorporated	Ronkonkoma	Suffolk	Long Island	LIPA	Independent laboratory testing	140	140	45	\$600,000	7
140	Richardson Brands Company	Canajoharie	Montgomery	Mohawk Valley	NGRID	Manufacturer of confectionery products	316	316	142	\$2,800,000	7

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
141	Sabin Metal Corporation	Scottsville	Monroe	Finger Lakes	NGRID	Precious metal refining & recovery	500	500	139	\$1,500,000	7
142	Saint Gobain Abrasives, Inc.	Watervliet	Albany	Capital District	NGRID	Manufacturer of coated abrasive products	1,140	1,140	138	\$1,000,000	7
143	Saint-Gobain Adfors America, Inc.	Albion	Orleans	Finger Lakes	NGRID	Manufacturer of fiberglass & polyester reinforcements	500	500	190	\$8,000,000	7
144	Samaritan Medical Center	Watertown	Jefferson	North Country	NGRID	Hospital & healthcare center	646	646	1,557	\$37,000,000	7
145	Samaritan-Keep Nursing Home, Inc.	Watertown	Jefferson	North Country	NGRID	Long-term residential care facility	210	210	326	\$1,000,000	7
146	Schilling Forge, Inc.	Syracuse	Onondaga	Central New York	NGRID	Supplier of precision forgings	160	160	25	\$75,000	7
147	Schneider Packaging Equipment Company, Inc.	Brewerton	Onondaga	Central New York	NGRID	Manufacturer of packaging equipment	120	120	115	\$250,000	7
148	Silicon Carbide Products, Inc.	Horseheads	Chemung	Southern Tier	NYSEG	Manufacturer of ceramic components	196	196	22	\$265,000	7
149	Solvaira Specialties Inc.	North Tonawanda	Niagara	Western New York	NGRID	Producer of insoluble fiber products	640	640	70	\$1,000,000	7
150	Sonoco Plastics, Inc.	Chatham	Columbia	Capital District	NYSEG	Manufacturer of injection molded parts	740	740	85	\$700,000	7
151	Sorrento Lactalis, Inc.	Buffalo	Erie	Western New York	NGRID	Cheese production plant	660	660	550	\$12,000,000	7
152	Southern Glazer's Wine and Spirits of New York, LLC	Syosset	Nassau	Long Island	LIPA	Wine & spirits distributor	786	786	1,000	\$3,000,000	7
153	Southern Glazer's Wine and Spirits of Upstate New York, LLC	Syracuse	Onondaga	Central New York	NGRID	Wine & spirits distributor	50	50	600	\$3,000,000	7
154	Special Metals Corporation	New Hartford	Oneida	Mohawk Valley	NGRID	Superalloy processing facility	4,900	4,900	360	\$42,357,000	7
155	Special Metals Corporation	Dunkirk	Chautauqua	Western New York	NGRID	Superalloy processing facility	526	526	78	\$20,000,000	7
156	Specialized Packaging Radisson LLC	Baldwinsville	Onondaga	Central New York	NGRID	Manufacturer of folding cartons	600	600	235	\$4,500,000	7
157	St. Lawrence University	Canton	St. Lawrence	North Country	NGRID	Institution of higher education	876	876	720	\$18,000,000	7
158	Staroba Plastics, Inc.	Holland	Erie	Western New York	NYSEG	Injection molding & tool building	600	600	84	\$250,000	7
159	Stature Electric, Inc.	Watertown	Jefferson	North Country	NGRID	Manufacturer of customized & gear motors	236	236	55	\$500,000	7
160	Syracuse Label Co. Inc.	North Syracuse	Onondaga	Central New York	NGRID	Manufacturer of printing labels	166	166	88	\$2,000,000	7

Retention-Based Allocations

Line	Company	City	County	Economic Development Region	IOU	Description	Current kW Amount	kW Recommendation	Job Commitments	Capital Investment Commitment (\$)	Contract Term (years)
161	Tebbens Steel LLC	Calverton	Suffolk	Long Island	LIPA	Steel & metal fabrication	50	50	53	\$2,100,000	7
162	Tessy Plastics Corp.	Elbridge	Onondaga	Central New York	NYSEG	Manufacturer of plastic parts for medical industry	2,530	2,530	1,047	\$200,000	7
163	The Fountainhead Group, Inc.	New York Mills	Oneida	Mohawk Valley	NGRID	Manufacturer of compressed air sprayers	300	300	170	\$1,000,000	7
164	The Gunlocke Company L.L.C.	Wayland	Steuben	Southern Tier	NYSEG	Manufacturer of office furniture	1,606	1,606	601	\$6,000,000	7
165	The New York Times Company	Flushing	Queens	New York City	CONED	Newspaper printing & distribution	4,150	4,150	467	\$20,000,000	7
166	The Producto Corporation	Jamestown	Chautauqua	Western New York	NGRID	Manufacturer of precision tooling components	176	176	90	\$5,000,000	7
167	The Sag Harbor Industries, Inc.	Sag Harbor	Suffolk	Long Island	LIPA	Manufacturer or custom-made coils & conductors	50	50	76	\$2,000,000	7
168	Therm, Incorporated	Ithaca	Tompkins	Southern Tier	NYSEG	Manufacturer of aerospace machining parts	336	336	150	\$1,000,000	7
169	TMP Technologies, Inc.	Wyoming	Erie	Western New York	NYSEG	Manufacturer of liquid applicator tips	180	180	24	\$200,000	7
170	TMP Technologies, Inc.	Buffalo	Erie	Western New York	NGRID	Manufacturer of liquid applicator tips	60	60	22	\$100,000	7
171	Transcontinental Ultra Flex Inc.	Brooklyn	Kings	New York City	CONED	Manufacturer of plastic packaging products	656	656	250	\$5,000,000	7
172	Turbine Engine Components Technologies - Utica Corporation	Whitesboro	Oneida	Mohawk Valley	NGRID	Manufacturer of fan & turbine blades	1,266	1,266	165	\$11,000,000	7
173	U.S. Nonwovens Corp.	Brentwood	Suffolk	Long Island	LIPA	Manufacturer of household & personal care products	56	56	700	\$3,500,000	7
174	United Health Services Hospitals, Inc.	Vestal	Broome	Southern Tier	NYSEG	Healthcare services & medical offices	170	170	167	\$28,000,000	7
175	Universal Photonics Inc.	Central Islip	Suffolk	Long Island	LIPA	Manufacturer of surface preparation materials	40	40	80	\$750,000	7
176	USTA National Tennis Center Incorporated	Flushing	Queens	New York City	CONED	Year-round tennis center	216	216	129	\$100,000,000	7
177	Wayne County Eggs, LLC	Wolcott	Wayne	Finger Lakes	RGE	Egg farm	460	460	95	\$3,000,000	7
178	Worthington Steel Rome, LLC	Rome	Oneida	Mohawk Valley	NGRID	Manufacturer strip steel products	1,576	1,576	120	\$15,000,000	7
179	Yeshiva University	New York	New York	New York City	CONED	Institution of higher education	90	90	151	\$750,000	7
180	YWCA of the Niagara Frontier, Inc.	Niagara Falls	Niagara	Western New York	NGRID	Community services & programs	10	10	12	\$200,000	7

EXHIBIT 5d i-1b-C
(Statutory Criteria – RNY Power Program)

- the significance of the cost of electricity to the applicant's overall cost of doing business, and the impact that a Recharge New York power allocation will have on the applicant's operating costs;
- the extent to which a Recharge New York power allocation will result in new capital investment in the state by the applicant;
- the extent to which a Recharge New York power allocation is consistent with any regional economic development council strategies and priorities;
- the type and cost of buildings, equipment and facilities to be constructed, enlarged or installed if the applicant were to receive an allocation;
- the applicant's payroll, salaries, benefits and number of jobs at the facility for which a Recharge New York power allocation is requested;
- the number of jobs that will be created or retained within the state in relation to the requested Recharge New York power allocation, and the extent to which the applicant will agree to commit to creating or retaining such jobs as a condition to receiving a Recharge New York power allocation;
- whether the applicant, due to the cost of electricity, is at risk of closing or curtailing facilities or operations in the state, relocating facilities or operations out of the state, or losing a significant number of jobs in the state, in the absence of a Recharge New York power allocation;
- the significance of the applicant's facility that would receive the Recharge New York power allocation to the economy of the area in which such facility is located;
- the extent to which the applicant has invested in energy efficiency measures, will agree to participate in or perform energy audits of its facilities, will agree to participate in energy efficiency programs of the authority, or will commit to implement or otherwise make tangible investments in energy efficiency measures as a condition to receiving a Recharge New York power allocation;
- whether the applicant receives a hydroelectric power allocation or benefits supported by the sale of hydroelectric power under another program administered in whole or in part by the New York Power Authority;
- the extent to which a Recharge New York power allocation will result in an advantage for an applicant in relation to the applicant's competitors within the state; and
- in addition to the foregoing criteria, in the case of a not-for-profit corporation, whether the applicant provides critical services or substantial benefits to the local community in which the facility for which the Recharge New York power allocation is requested is located.

New York Power Authority
Expansion and Replacement Power In-Service Allocations

Exhibit "5d i 1c-B"
October 2, 2018

Line	Customer Name	City	County	Region	IOU	Program	Allocation (kW)	Current Job Commitment	Extension Job Commitment	Annual Capital Investment Commitment (\$)	Current Allocation Expiration Date	Proposed Extended Allocation Expiration Date
1	3M Company	Tonawanda	Erie	Western New York	NGRID	EP	150	351	351	*	8/31/2024	12/31/2028
2	3M Company	Tonawanda	Erie	Western New York	NGRID	EP	500	*	*	*	6/30/2020	12/31/2028
3	3M Company	Tonawanda	Erie	Western New York	NGRID	EP	1,000	*	*	\$ 5,936,601	6/30/2020	12/31/2028
4	ADM Milling Company	Buffalo	Erie	Western New York	NGRID	EP	1,500	*	*	*	6/30/2020	12/31/2028
5	ADM Milling Company	Buffalo	Erie	Western New York	NGRID	RP	1,900	84	84	\$ 660,874	6/30/2020	12/31/2028
6	Advance 2000, Inc.	Amherst	Erie	Western New York	NGRID	RP	2,900	160	160	To be determined	1/31/2025	12/31/2028
7	Air Products and Chemicals, Inc.	Medina	Orleans	Finger Lakes	NGRID	RP	350	7	7	\$ 33,000	9/30/2020	12/31/2028
8	API Heat Transfer, Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	238	238	\$ 384,000	11/30/2021	12/31/2028
9	Ascension Industries, Inc.	North Tonawanda	Niagara	Western New York	NGRID	RP	150	100	100	\$ 224,010	6/30/2020	12/31/2028
10	Ashland Advanced Materials LLC	Niagara Falls	Niagara	Western New York	NGRID	EP	2,050	44	44	\$ 150,000	12/31/2021	12/31/2028
11	Ashton Potter (USA) LTD	Williamsville	Erie	Western New York	NGRID	RP	450	50	50	\$ 50,000	6/30/2020	12/31/2028
12	ATI Allvac	Lockport	Niagara	Western New York	NYSEG	EP	200	*	*	\$ 398,765	6/30/2020	12/31/2028
13	ATI Allvac	Lockport	Niagara	Western New York	NYSEG	EP	1,000	*	*	*	10/31/2019	12/31/2028
14	ATI Allvac	Lockport	Niagara	Western New York	NYSEG	RP	300	71	71	*	10/31/2019	12/31/2028
15	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	EP	1,200	*	*	*	11/30/2019	12/31/2028
16	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	*	*	*	6/30/2020	12/31/2028
17	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	*	*	*	6/30/2020	12/31/2028
18	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	RP	3,000	*	*	*	6/30/2020	12/31/2028
19	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	RP	8,060	*	*	\$ 1,699,538	6/30/2020	12/31/2028
20	Aurubis Buffalo, Inc.	Buffalo	Erie	Western New York	NGRID	RP	2,800	710	710	*	6/30/2020	12/31/2028
21	BlackRock Niagara LLC	Getzville	Erie	Western New York	NGRID	EP	2,000	25	25	To be determined	11/30/2023	12/31/2028
22	Brunner, Inc.	Medina	Orleans	Finger Lakes	NGRID	EP	1,500	*	*	*	6/30/2020	12/31/2028
23	Brunner, Inc.	Medina	Orleans	Finger Lakes	NGRID	EP	300	*	*	*	6/30/2020	12/31/2028
24	Brunner, Inc.	Medina	Orleans	Finger Lakes	NGRID	RP	1,200	*	*	*	6/30/2020	12/31/2028
25	Brunner, Inc.	Medina	Orleans	Finger Lakes	NGRID	RP	2,500	*	*	\$ 1,640,858	11/30/2020	12/31/2028
26	Brunner, Inc.	Medina	Orleans	Finger Lakes	NGRID	RP	2,400	406	406	*	5/31/2022	12/31/2028
27	Buffalo Newspress Inc.	Buffalo	Erie	Western New York	NGRID	EP	200	138	138	\$ 303,630	6/30/2020	12/31/2028
28	Buffalo Tungsten Incorporated	Depew	Erie	Western New York	NGRID	RP	800	*	*	*	6/30/2020	12/31/2028
29	Buffalo Tungsten Incorporated	Depew	Erie	Western New York	NGRID	RP	1,250	62	62	\$ 98,620	6/30/2020	12/31/2028
30	Carleton Technologies Inc.	Orchard Park	Erie	Western New York	NYSEG	EP	700	262	262	\$ 534,493	6/30/2020	12/31/2028
31	CCL Label Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	106	106	\$ 259,216	6/30/2020	12/31/2028
32	CertainTeed Corporation	Buffalo	Erie	Western New York	NGRID	EP	2,400	86	86	\$ 163,522	6/30/2020	12/31/2028
33	Citigroup Technology, Inc.	Getzville	Erie	Western New York	NGRID	RP	750	480	480	\$ 7,500	6/30/2020	12/31/2028
34	Cliffstar LLC	Dunkirk	Chautauqua	Western New York	NGRID	EP	400	428	428	\$ 2,642,313	6/30/2020	12/31/2028
35	Confer Plastics, Inc.	North Tonawanda	Niagara	Western New York	NGRID	EP	400	204	204	*	10/31/2024	12/31/2028
36	Confer Plastics, Inc.	North Tonawanda	Niagara	Western New York	NGRID	RP	300	*	*	\$ 100,000	6/30/2020	12/31/2028
37	Cummins Inc.	Lakewood	Chautauqua	Western New York	NGRID	EP	700	1,417	1,417	To be determined	8/31/2024	12/31/2028
38	Delaco AMTB, LLC	Tonawanda	Erie	Western New York	NGRID	RP	100	7	7	\$ 227,950	4/30/2019	12/31/2028
39	DKP Buffalo, LLC	Tonawanda	Erie	Western New York	NGRID	EP	750	57	57	\$ 350,000	6/30/2020	12/31/2028
40	Dunkirk Specialty Steel, LLC	Dunkirk	Chautauqua	Western New York	NGRID	EP	5,250	146	146	\$ 998,382	6/30/2020	12/31/2028
41	E.I. du Pont de Nemours & Co., Inc.	Buffalo	Erie	Western New York	NGRID	EP	1,800	*	*	*	6/30/2020	12/31/2028
42	E.I. du Pont de Nemours & Co., Inc.	Buffalo	Erie	Western New York	NGRID	RP	500	*	*	*	6/30/2020	12/31/2028
43	E.I. du Pont de Nemours & Co., Inc.	Buffalo	Erie	Western New York	NGRID	RP	1,300	*	*	*	6/30/2020	12/31/2028
44	E.I. du Pont de Nemours & Co., Inc.	Buffalo	Erie	Western New York	NGRID	RP	675	605	605	\$ 8,533,333	6/30/2020	12/31/2028
45	Fieldbrook Foods Corporation	Dunkirk	Chautauqua	Western New York	NGRID	EP	1,000	*	*	*	6/30/2020	12/31/2028
46	Fieldbrook Foods Corporation	Dunkirk	Chautauqua	Western New York	NGRID	EP	2,000	478	478	\$ 2,785,420	6/30/2020	12/31/2028
47	Finger Food Products, Inc.	Sanborn	Niagara	Western New York	NGRID	EP	100	29	29	To be determined	5/31/2024	12/31/2028
48	Flexo Transparent, Inc.	Buffalo	Erie	Western New York	NGRID	RP	380	100	100	\$ 192,335	6/30/2020	12/31/2028
49	Ford Motor Company	Buffalo	Erie	Western New York	NGRID	EP	2,900	*	*	*	6/30/2020	12/31/2028

New York Power Authority
Expansion and Replacement Power In-Service Allocations

Exhibit "5d i 1c-B"
October 2, 2018

Line	Customer Name	City	County	Region	IOU	Program	Allocation (kW)	Current Job Commitment	Extension Job Commitment	Annual Capital Investment Commitment (\$)	Current Allocation Expiration Date	Proposed Extended Allocation Expiration Date
50	Ford Motor Company	Buffalo	Erie	Western New York	NGRID	EP	4,300	*	*	*	6/30/2020	12/31/2028
51	Ford Motor Company	Buffalo	Erie	Western New York	NGRID	EP	1,500	*	*	\$ 6,733,333	6/30/2020	12/31/2028
52	Ford Motor Company	Buffalo	Erie	Western New York	NGRID	EP	1,000	990	990	*	8/31/2022	12/31/2028
53	Fresenius Kabi USA, LLC	Grand Island	Erie	Western New York	NGRID	RP	1,000	*	*	*	6/30/2020	12/31/2028
54	Fresenius Kabi USA, LLC	Grand Island	Erie	Western New York	NGRID	RP	1,000	*	*	\$ 1,135,955	6/30/2020	12/31/2028
55	Fresenius Kabi USA, LLC	Grand Island	Erie	Western New York	NGRID	RP	500	568	568		5/31/2019	12/31/2028
56	GEICO	Getzville	Erie	Western New York	NGRID	EP	1,300	*	*	\$ 825,709	6/30/2020	12/31/2028
57	GEICO	Getzville	Erie	Western New York	NGRID	RP	400	2,900	2,900	*	4/30/2025	12/31/2028
58	General Mills Flour Division	Buffalo	Erie	Western New York	NGRID	EP	1,000	*	*	*	6/30/2020	12/31/2028
59	General Mills Flour Division	Buffalo	Erie	Western New York	NGRID	RP	1,000	*	*	*	6/30/2020	12/31/2028
60	General Mills Flour Division	Buffalo	Erie	Western New York	NGRID	RP	3,100	400	400	\$ 5,974,667	6/30/2020	12/31/2028
61	General Motors LLC	Buffalo	Erie	Western New York	NGRID	EP	12,750	*	*	*	6/30/2028	12/31/2028
62	General Motors LLC	Buffalo	Erie	Western New York	NGRID	EP	5,000	*	*	*	6/30/2028	12/31/2028
63	General Motors LLC	Buffalo	Erie	Western New York	NGRID	EP	1,100	*	*	*	6/30/2028	12/31/2028
64	General Motors LLC	Buffalo	Erie	Western New York	NGRID	EP	800	*	*	*	6/30/2028	12/31/2028
65	General Motors LLC	Buffalo	Erie	Western New York	NGRID	RP	600	*	*	*	6/30/2028	12/31/2028
66	General Motors LLC	Buffalo	Erie	Western New York	NGRID	RP	2,000	675	675	\$ 14,136,667	6/30/2028	12/31/2028
67	Global Abrasive Products, Inc.	Lockport	Niagara	Western New York	NYSEG	EP	120	30	30		6/30/2020	12/31/2028
68	Globe Metallurgical, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	18,400	100	100	\$ 3,366,667	9/30/2021	12/31/2028
69	GM Components Holdings LLC	Lockport	Niagara	Western New York	NYSEG	EP	8,200	*	*	*	6/30/2020	12/31/2028
70	GM Components Holdings LLC	Lockport	Niagara	Western New York	NYSEG	EP	11,750	779	779	\$ 5,165,233	6/30/2020	12/31/2028
71	Graphic Controls Acquisition Corporation	Buffalo	Erie	Western New York	NGRID	EP	130	*	*	*	3/31/2020	12/31/2028
72	Graphic Controls Acquisition Corporation	Buffalo	Erie	Western New York	NGRID	RP	334	318	318	*	8/31/2023	12/31/2028
73	Graphic Controls Acquisition Corporation	Buffalo	Erie	Western New York	NGRID	RP	250	*	*	\$ 357,679	6/30/2020	12/31/2028
74	Graphic Controls Acquisition Corporation	Buffalo	Erie	Western New York	NGRID	RP	120	*	*	*	6/30/2020	12/31/2028
75	Greatbatch Inc	Alden	Erie	Western New York	NYSEG	EP	1,500	333	333	\$ 1,041,555	6/30/2020	12/31/2028
76	Greenpac Mill, LLC	Niagara Falls	Niagara	Western New York	NGRID	RP	10,000	108	108	To be determined	6/30/2020	12/31/2028
77	Habasit America, Inc.	Buffalo	Erie	Western New York	NGRID	RP	200	80	80	\$ 200,000	6/30/2020	12/31/2028
78	Hammond Manufacturing Company Inc.	Cheektowaga	Erie	Western New York	NGRID	RP	100	24	24	\$ 5,000	6/30/2020	12/31/2028
79	Honeywell International	Buffalo	Erie	Western New York	NGRID	RP	300	132	132	\$ 1,400,000	6/30/2020	12/31/2028
80	Hurtubise Tire, Inc.	North Tonawanda	Niagara	Western New York	NGRID	RP	100	10	10	\$ 30,000	6/30/2020	12/31/2028
81	Hydro-Air Components, Inc.	Buffalo	Erie	Western New York	NGRID	EP	250	116	116	\$ 125,224	6/30/2020	12/31/2028
82	I Squared R Element Co., Inc.	Akron	Erie	Western New York	NGRID	RP	500	*	*	\$ 76,521	6/30/2020	12/31/2028
83	I Squared R Element Co., Inc.	Akron	Erie	Western New York	NGRID	RP	400	93	93	*	7/31/2019	12/31/2028
84	Ingram Micro, Inc.	Williamsville	Erie	Western New York	NGRID	EP	130	1,600	1,600	*	9/30/2021	12/31/2028
85	Ingram Micro, Inc.	Williamsville	Erie	Western New York	NGRID	EP	900	*	*	\$ 71,433	10/31/2020	12/31/2028
86	Innomotive Solutions Group LLC	Lancaster	Erie	Western New York	NYSEG	RP	100	21	21	To be determined	5/31/2024	12/31/2028
87	International Imaging Materials	Amherst	Erie	Western New York	NGRID	EP	1,000	*	*	*	6/30/2020	12/31/2028
88	International Imaging Materials	Amherst	Erie	Western New York	NGRID	EP	1,250	*	*	*	6/30/2020	12/31/2028
89	International Imaging Materials	Amherst	Erie	Western New York	NGRID	RP	250	*	*	\$ 1,217,581	6/30/2020	12/31/2028
90	International Imaging Materials	Amherst	Erie	Western New York	NGRID	RP	200	*	*	*	6/30/2020	12/31/2028
91	International Imaging Materials	Amherst	Erie	Western New York	NGRID	RP	200	358	358	*	11/30/2020	12/31/2028
92	Kreher's Sunrise Farm, LLC	Basom (Town of Alabama)	Genesee	Finger Lakes	NGRID	RP	100	29	29	To be determined	1/31/2023	12/31/2028
93	Life Technologies Corporation	Grand Island	Erie	Western New York	NGRID	RP	400	*	*	*	6/30/2020	12/31/2028
94	Life Technologies Corporation	Grand Island	Erie	Western New York	NGRID	RP	375	525	525	\$ 564,929	6/30/2020	12/31/2028
95	Linde LLC	Buffalo	Erie	Western New York	NGRID	EP	10,500	40	40	\$ 386,000	6/30/2020	12/31/2028
96	Lockheed Martin Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	200	26	26	\$ 223,667	6/30/2020	12/31/2028
97	M&T Bank	Amherst	Erie	Western New York	NGRID	EP	1,150	128	128	To be determined	6/30/2020	12/31/2028
98	Maclean Curtis, LLC	Buffalo	Erie	Western New York	NGRID	RP	300	*	*	*	6/30/2020	12/31/2028

New York Power Authority
Expansion and Replacement Power In-Service Allocations

Exhibit "5d i 1c-B"
October 2, 2018

Line	Customer Name	City	County	Region	IOU	Program	Allocation (kW)	Current Job Commitment	Extension Job Commitment	Annual Capital Investment Commitment (\$)	Current Allocation Expiration Date	Proposed Extended Allocation Expiration Date
99	Maclean Curtis, LLC	Buffalo	Erie	Western New York	NGRID	RP	350	*	*	*	6/30/2020	12/31/2028
100	Maclean Curtis, LLC	Buffalo	Erie	Western New York	NGRID	RP	1,100	150	150	\$ 1,088,196	6/30/2020	12/31/2028
101	Mahle Behr Troy, Inc.	Lockport	Erie	Western New York	NYSEG	EP	500	*	*		3/31/2019	12/31/2028
102	Mahle Behr Troy, Inc.	Lockport	Erie	Western New York	NYSEG	RP	1,000	208	208	To be determined	3/31/2019	12/31/2028
103	Mayer Brothers Apple Products	West Seneca	Erie	Western New York	NYSEG	EP	200	134	134	\$ 1,983,667	6/30/2020	12/31/2028
104	Metaullics Systems (2040 Cory Rd)	Sanborn	Niagara	Western New York	NGRID	RP	1,000	29	29	\$ 156,599	6/30/2020	12/31/2028
105	Metaullics Systems (2050 Cory Rd)	Sanborn	Niagara	Western New York	NGRID	EP	1,050	30	30	*	6/30/2020	12/31/2028
106	Metaullics Systems (2050 Cory Rd)	Sanborn	Niagara	Western New York	NGRID	RP	500	*	*	\$ 25,000	6/30/2020	12/31/2028
107	MOD-PAC Corporation	Buffalo	Erie	Western New York	NGRID	EP	400	405	405	To be determined	10/31/2019	12/31/2028
108	Moldtech, Inc.	Lancaster	Erie	Western New York	NYSEG	EP	100	65	65	\$ 326,733	12/31/2020	12/31/2028
109	Monofrax, LLC	Falconer	Chautauqua	Western New York	James	EP	1,350	139	139	\$ 651,399	1/31/2021	12/31/2028
110	Moog Inc.	East Aurora	Erie	Western New York	NYSEG	EP	750	*	*	\$ 13,911,658	6/30/2020	12/31/2028
111	Moog Inc.	East Aurora	Erie	Western New York	NYSEG	EP	3,000	*	*	*	6/30/2020	12/31/2028
112	Moog Inc.	East Aurora	Erie	Western New York	NYSEG	EP	500	*	*	*	6/30/2020	12/31/2028
113	Moog Inc.	East Aurora	Erie	Western New York	NYSEG	EP	300	2,567	2,567	*	6/30/2020	12/31/2028
114	Moog Inc.	East Aurora	Erie	Western New York	NYSEG	RP	800	*	*	*	6/30/2020	12/31/2028
115	Nestle Purina PetCare Company	Dunkirk	Chautauqua	Western New York	NGRID	EP	500	*	*	*	6/30/2020	12/31/2028
116	Nestle Purina PetCare Company	Dunkirk	Chautauqua	Western New York	NGRID	EP	900	*	*	*	6/30/2020	12/31/2028
117	Nestle Purina PetCare Company	Dunkirk	Chautauqua	Western New York	NGRID	EP	2,000	*	*	*	6/30/2020	12/31/2028
118	Nestle Purina PetCare Company	Dunkirk	Chautauqua	Western New York	NGRID	EP	500	419	419	\$ 2,920,536	6/30/2020	12/31/2028
119	Niacet Corporation	Niagara Falls	Niagara	Western New York	NGRID	EP	500	*	*	*	6/30/2020	12/31/2028
120	Niacet Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	500	92	92	*	6/30/2020	12/31/2028
121	Niacet Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	1,000	*	*	*	6/30/2020	12/31/2028
122	Niacet Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	400	*	*	\$ 880,000	6/30/2020	12/31/2028
123	Niagara Coatings Services, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	200	17	17	To be determined	6/30/2020	12/31/2028
124	Niagara Falls Water Board	Niagara Falls	Niagara	Western New York	NGRID	RP	1,250	0	0	*	6/30/2020	12/31/2028
125	Niagara Falls Water Board	Niagara Falls	Niagara	Western New York	NGRID	RP	619	0	0	*	6/30/2020	12/31/2028
126	Niagara Falls Water Board	Niagara Falls	Niagara	Western New York	NGRID	RP	1,775	0	0	\$ 3,766,667	6/30/2020	12/31/2028
127	Niagara Refining LLC	Depew	Erie	Western New York	NGRID	RP	2,500	50	50	To be determined	4/30/2021	12/31/2028
128	Niagara Sheets, LLC	Wheatfield	Niagara	Western New York	NGRID	RP	400	33	33	\$ 470,000	6/30/2020	12/31/2028
129	Norampac Ind. Inc. Niagara Falls Division	Niagara Falls	Niagara	Western New York	NGRID	EP	1,600	126	126	\$ 1,302,040	6/30/2020	12/31/2028
130	North American Hoganas	Niagara Falls	Niagara	Western New York	NGRID	EP	4,000	*	*	*	6/30/2020	12/31/2028
131	North American Hoganas	Niagara Falls	Niagara	Western New York	NGRID	RP	1,000	57	57	\$ 499,660	6/30/2020	12/31/2028
132	Nuttall Gear Company	Niagara Falls	Niagara	Western New York	NGRID	EP	350	85	85	\$ 85,295	6/30/2020	12/31/2028
133	Oath Holdings, Inc.	Lockport	Niagara	Western New York	NYSEG	EP	7,200	115	115	To be determined	2/28/2022	12/31/2028
134	Oath Holdings, Inc.	Lockport	Niagara	Western New York	NYSEG	EP	15,000	125	125	To be determined	3/31/2025	12/31/2028
135	Occidental Chemical Corporation	Niagara Falls	Niagara	Western New York	NGRID	EP	10,000	*	*	*	6/30/2020	12/31/2028
136	Occidental Chemical Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	56,000	170	170	\$ 5,966,667	6/30/2020	12/31/2028
137	Olin Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	2,290	*	*	*	6/30/2020	12/31/2028
138	Olin Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	15,000	*	*	*	6/30/2020	12/31/2028
139	Olin Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	21,300	*	*	*	6/30/2020	12/31/2028
140	Olin Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	40,860	*	*	\$ 7,800,000	6/30/2020	12/31/2028
141	Olin Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	2,000	210	210		6/30/2020	12/31/2028
142	PCB Piezotronics, Inc.	Depew	Erie	Western New York	NYSEG	RP	250	57	57	\$ 82,361	6/30/2020	12/31/2028
143	PeroxyChem LLC	Tonawanda	Erie	Western New York	NGRID	EP	1,500	*	*	*	11/30/2019	12/31/2028
144	PeroxyChem LLC	Tonawanda	Erie	Western New York	NGRID	RP	750	*	*	*	6/30/2020	12/31/2028
145	PeroxyChem LLC	Tonawanda	Erie	Western New York	NGRID	RP	5,500	*	*	*	6/30/2020	12/31/2028
146	PeroxyChem LLC	Tonawanda	Erie	Western New York	NGRID	RP	2,500	135	135	\$ 844,333	6/30/2020	12/31/2028
147	Praxair, Inc.	Niagara Falls	Niagara	Western New York	NGRID	EP	1,950	*	*	*	6/30/2020	12/31/2028

New York Power Authority
Expansion and Replacement Power In-Service Allocations

Exhibit "5d i 1c-B"
October 2, 2018

Line	Customer Name	City	County	Region	IOU	Program	Allocation (kW)	Current Job Commitment	Extension Job Commitment	Annual Capital Investment Commitment (\$)	Current Allocation Expiration Date	Proposed Extended Allocation Expiration Date
148	Praxair, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	8,750	*	*	*	6/30/2020	12/31/2028
149	Praxair, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	35,900	81	81	\$ 656,246	6/30/2020	12/31/2028
150	Praxair, Inc.	Tonawanda	Erie	Western New York	NGRID	EP	1,950	*	*	*	6/30/2020	12/31/2028
151	Praxair, Inc.	Tonawanda	Erie	Western New York	NGRID	RP	750	*	*	*	6/30/2020	12/31/2028
152	Praxair, Inc.	Tonawanda	Erie	Western New York	NGRID	RP	1,950	1,274	1,274	\$ 1,564,217	6/30/2020	12/31/2028
153	Precious Plate Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	800	*	*	*	6/30/2020	12/31/2028
154	Precious Plate Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	400	164	164	\$ 1,016,075	3/31/2021	12/31/2028
155	Pride Pak Canada Ltd.	Medina	Orleans	Finger Lakes	NGRID	RP	1,000	163	163	To be determined	5/31/2024	12/31/2028
156	Protective Industries, Inc.	Buffalo	Erie	Western New York	NGRID	EP	250	224	224	\$ 2,010,941	6/30/2020	12/31/2028
157	Republic Steel	Blasdell	Erie	Western New York	NGRID	EP	7,200	*	*	*	6/30/2020	12/31/2028
158	Republic Steel	Blasdell	Erie	Western New York	NGRID	RP	1,900	237	237	\$ 534,528	6/30/2020	12/31/2028
159	RockTenn CP, LLC	North Tonawanda	Niagara	Western New York	NGRID	EP	300	128	128	To be determined	3/31/2024	12/31/2028
160	Rosina Food Products, Inc.	Cheektowaga	Erie	Western New York	NYSEG	EP	100	*	*	\$ 816,581	6/30/2020	12/31/2028
161	Rosina Food Products, Inc.	Cheektowaga	Erie	Western New York	NYSEG	EP	250	141	141	*	6/30/2020	12/31/2028
162	Rosina Food Products, Inc.	West Seneca	Erie	Western New York	NYSEG	EP	200	159	159	\$ 533,446	6/30/2020	12/31/2028
163	RubberForm Recycled Products, LLC	Lockport	Niagara	Western New York	NYSEG	EP	100	18	18	\$ 3,000	6/30/2020	12/31/2028
164	Saint-Gobain Advanced Ceramics - Boron Nitride	Amherst	Erie	Western New York	NGRID	RP	570	*	*	\$ 611,667	6/30/2020	12/31/2028
165	Saint-Gobain Advanced Ceramics - Boron Nitride	Amherst	Erie	Western New York	NGRID	RP	2,500	56	56	*	6/30/2020	12/31/2028
166	Saint-Gobain Advanced Structural Ceramics	Niagara Falls	Niagara	Western New York	NGRID	RP	200	*	*	\$ 1,336,533	6/30/2020	12/31/2028
167	Saint-Gobain Advanced Structural Ceramics	Niagara Falls	Niagara	Western New York	NGRID	RP	2,600	*	*	*	6/30/2020	12/31/2028
168	Saint-Gobain Advanced Structural Ceramics	Niagara Falls	Niagara	Western New York	NGRID	RP	1,000	*	*	*	6/30/2020	12/31/2028
169	Saint-Gobain Advanced Structural Ceramics	Niagara Falls	Niagara	Western New York	NGRID	RP	700	114	114	*	6/30/2020	12/31/2028
170	Saint-Gobain Ceramics & Plastics, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	1,005	*	*	\$ 1,384,966	6/30/2020	12/31/2028
171	Saint-Gobain Ceramics & Plastics, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	2,100	*	*	*	6/30/2020	12/31/2028
172	Saint-Gobain Ceramics & Plastics, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	100	69	69	*	6/30/2020	12/31/2028
173	Servotronics, Inc.	Elma	Erie	Western New York	NYSEG	EP	500	155	155	\$ 257,333	6/30/2020	12/31/2028
174	Sorrento Lactalis, Inc.	Buffalo	Erie	Western New York	NGRID	RP	1,500	*	*	\$ 762,000	6/30/2020	12/31/2028
175	Sorrento Lactalis, Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	500	500	*	6/30/2020	12/31/2028
176	Sotek Inc./Belrix Industries, Inc.	Buffalo	Erie	Western New York	NGRID	RP	100	71	71	\$ 330,145	6/30/2020	12/31/2028
177	Special Metals Corporation	Dunkirk	Chautauqua	Western New York	NGRID	EP	950	76	76	\$ 217,667	6/30/2020	12/31/2028
178	Steuben Foods Incorporated	Elma	Erie	Western New York	NYSEG	EP	3,000	*	*	*	6/30/2028	12/31/2028
179	Steuben Foods Incorporated	Elma	Erie	Western New York	NYSEG	EP	5,000	*	*	*	6/30/2028	12/31/2028
180	Steuben Foods Incorporated	Elma	Erie	Western New York	NYSEG	EP	750	576	576	\$ 934,213	6/30/2028	12/31/2028
181	Stollberg, Inc.	Niagara Falls	Niagara	Western New York	NGRID	EP	300	58	58	\$ 165,500	6/30/2020	12/31/2028
182	Sumitomo Rubber USA, LLC	Tonawanda	Erie	Western New York	NGRID	EP	6,000	*	*	\$ 5,117,817	6/30/2020	12/31/2028
183	Sumitomo Rubber USA, LLC	Tonawanda	Erie	Western New York	NGRID	RP	800	*	*	*	6/30/2020	12/31/2028
184	Sumitomo Rubber USA, LLC	Tonawanda	Erie	Western New York	NGRID	RP	850	*	*	*	6/30/2020	12/31/2028
185	Sumitomo Rubber USA, LLC	Tonawanda	Erie	Western New York	NGRID	RP	4,191	*	*	*	6/30/2020	12/31/2028
186	Sumitomo Rubber USA, LLC	Tonawanda	Erie	Western New York	NGRID	RP	250	1,239	1,239	*	6/30/2020	12/31/2028
187	TAM Ceramics Group of NY, LLC	Niagara Falls	Niagara	Western New York	NGRID	EP	450	*	*	\$ 241,667	6/30/2020	12/31/2028
188	TAM Ceramics Group of NY, LLC	Niagara Falls	Niagara	Western New York	NGRID	RP	5,650	71	71	*	6/30/2020	12/31/2028
189	Time Release Sciences, Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	77	77		6/30/2020	12/31/2028
190	Time Release Sciences, Inc.	Buffalo	Erie	Western New York	NGRID	RP	250	*	*	\$ 25,000	11/30/2020	12/31/2028
191	Time Release Sciences, Inc.	Buffalo	Erie	Western New York	NGRID	RP	200	*	*	*	6/30/2020	12/31/2028
192	Tops Markets, LLC	Lancaster	Erie	Western New York	NYSEG	EP	550	560	560	\$ 427,900	6/30/2020	12/31/2028
193	Tops Markets, LLC	West Seneca	Erie	Western New York	NYSEG	RP	600	63	63	\$ 33,000	11/30/2020	12/31/2028
194	Treibacher Schleifmittel North America, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	400	35	35	\$ 211,492	6/30/2020	12/31/2028
195	Trinity Packaging Corporation	Cheektowaga	Erie	Western New York	NYSEG	RP	200	150	150	To be determined	9/30/2021	12/31/2028
196	Try-It Distributing Co., Inc.	Lancaster	Erie	Western New York	NYSEG	EP	200	265	265	To be determined	6/30/2020	12/31/2028

New York Power Authority
Expansion and Replacement Power In-Service Allocations

Exhibit "5d i 1c-B"
October 2, 2018

Line	Customer Name	City	County	Region	IOU	Program	Allocation (kW)	Current Job Commitment	Extension Job Commitment	Annual Capital Investment Commitment (\$)	Current Allocation Expiration Date	Proposed Extended Allocation Expiration Date
197	Tulip Corporation	Niagara Falls	Niagara	Western New York	NGRID	EP	300	*	*	\$ 79,333	6/30/2020	12/31/2028
198	Tulip Corporation	Niagara Falls	Niagara	Western New York	NGRID	RP	1,200	70	70	*	6/30/2020	12/31/2028
199	Unifrax I LLC	Sanborn	Niagara	Western New York	NGRID	RP	1,000	95	95	\$ 32,667	6/30/2020	12/31/2028
200	Unifrax I LLC	Tonawanda	Erie	Western New York	NGRID	RP	1,355	*	*	*	2/28/2022	12/31/2028
201	Unifrax I LLC	Tonawanda	Erie	Western New York	NGRID	RP	1,000	*	*	*	6/30/2020	12/31/2028
202	Unifrax I LLC	Tonawanda	Erie	Western New York	NGRID	RP	2,600	238	238	\$ 340,333	6/30/2020	12/31/2028
203	Upstate Niagara Cooperative, Inc.	West Seneca	Erie	Western New York	NYSEG	EP	1,000	144	144	\$ 1,163,716	6/30/2020	12/31/2028
204	Washington Mills Electro Minerals Corp	Niagara Falls	Niagara	Western New York	NGRID	RP	5,750	58	58	\$ 1,475,667	6/30/2020	12/31/2028
205	Washington Mills Tonawanda, Inc.	Tonawanda	Erie	Western New York	NGRID	RP	250	29	29	\$ 237,333	6/30/2020	12/31/2028
206	Welded Tube USA, Inc.	Lackawanna	Erie	Western New York	NGRID	EP	2,870	89	89	To be determined	9/30/2020	12/31/2028
207	Western New York Energy, LLC	Medina	Orleans	Finger Lakes	NGRID	RP	5,000	40	40	\$ 42,402	6/30/2020	12/31/2028
						Totals *	514,209	30,139	30,139	\$ 136,736,376		

* Signifies that a job and/or capital investment commitment listed for a specific customer may also relate to this allocation. To avoid possible confusion, such commitment is listed only once. Commitments will be listed in the final contract with the customer as appropriate.

New York Power Authority
Expansion and Replacement Power Pending Allocations

Exhibit "5d i-1c-C"
October 2, 2018

Line	Customer Name	City	County	Region	IOU	Program	Allocation (kW)	Current Job Commitment	Extension Job Commitment	Specific Project Investment Commitment (\$)	Current Allocation Expiration Date	Proposed Extended Allocation Expiration Date
1	CI Filing Systems LLC	Tonawanda	Erie	Western New York	NGRID	RP	1,000	80	80	\$ 7,900,000	N/A	12/31/2028
2	Flexo Transparent, Inc.	Buffalo	Erie	Western New York	NGRID	RP	300	125	125	\$ 6,500,000	N/A	12/31/2028
3	Fresenius Kabi USA, LLC	Grand Island	Erie	Western New York	NGRID	RP	2,000	665	665	\$ 30,000,000	N/A	12/31/2028
4	Just Greens, LLC	Lackawanna	Erie	Western New York	NGRID	EP	1,840	36	36	\$ 32,620,132	N/A	12/31/2028
5	Mayer Bros. Apple Products, Inc.	Somerset	Niagara	Western New York	NGRID	RP	200	111	111	\$ 3,200,000	N/A	12/31/2028
6	Moog Inc.	East Aurora	Erie	Western New York	NYSEG	RP	4,000	3,224	3,224	\$ 33,800,000	N/A	12/31/2028
7	Niagara Coatings Services, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	100	28	28	\$ 475,000	N/A	12/31/2028
8	Saint-Gobain Ceramics & Plastics, Inc.	Niagara Falls	Niagara	Western New York	NGRID	RP	300	76	76	\$ 4,530,000	N/A	12/31/2028
9	Sumitomo Rubber USA, LLC	Tonawanda	Erie	Western New York	NGRID	RP	1,500	1,271	1,271	\$ 87,000,000	N/A	12/31/2028
10	Unifrax I LLC (Pirson Parkway)	Tonawanda	Erie	Western New York	NGRID	RP	1,400	*	*	\$ 18,500,000	N/A	12/31/2028
11	Unifrax I LLC (Pirson Parkway)	Tonawanda	Erie	Western New York	NGRID	RP	1,000	45	45	\$ 28,500,000	N/A	12/31/2028
12	Unifrax I LLC	Tonawanda	Erie	Western New York	NGRID	RP	1,900	318	318	\$ 33,000,000	N/A	12/31/2028
						Totals *	15,540	5,979	5,979	\$ 286,025,132		

* Signifies that a job and/or capital investment commitment listed for a specific customer may also relate to this allocation. To avoid possible confusion, such commitment is listed only once. Commitments will be listed in the final contract with the customer as appropriate.

POWER AUTHORITY

OF THE

STATE OF NEW YORK

30 South Pearl Street
10th Floor
Albany, New York 12207-3425

AGREEMENT FOR THE SALE
OF EXPANSION POWER AND/OR REPLACEMENT POWER

<Customer Legal Name>

The POWER AUTHORITY OF THE STATE OF NEW YORK (“Authority”), created pursuant to Chapter 772 of the New York Laws of 1931 and existing under Title I of Article V of the New York Public Authorities Law (“PAL”), having its office and principal place of business at 30 South Pearl Street, 10th Floor, Albany, New York 12207-3425, hereby enters into this Agreement for the Sale of Expansion Power and/or Replacement Power (“Agreement”) with <Customer Legal Name> (“Customer”) with offices and principal place of business at <Customer Address>. The Authority and the Customer are from time to time referred to in this Agreement as “Party” or collectively as “Parties” and agree as follows:

RECITALS

WHEREAS, the Authority is authorized to sell hydroelectric power produced by the Niagara Power Project, Federal Energy Regulatory Commission (“FERC”) Project No. 2216, including hydropower known as Expansion Power (“EP”) and Replacement Power (“RP”) to qualified businesses in accordance with PAL § 1005(5) and (13);

WHEREAS, prior to the Effective Date, the Authority has provided the Customer with electric service in accordance with one or more written agreements (collectively, “Prior Agreement”) to enable the Customer to receive Electric Service for one or more allocations of EP and/or RP awarded by the Authority;

WHEREAS, the Customer has requested that its EP and/or RP allocation(s) be extended, and has offered to continue to make specific commitments relating to, among other things, the creation and/or retention of jobs, capital investments and adoption of energy efficiency measures at the Facility, in exchange for such extension;

WHEREAS, the Authority’s Board of Trustees (“Trustees”) approved extension of the Customer’s existing allocation(s) (defined in Article I of this Agreement as the “Allocation”), subject to agreement on the terms and conditions for the sale of the Allocation and related matters;

WHEREAS, the Parties have reached an agreement on the terms and conditions applicable for the sale of the Allocation for an extended term as provided for in this Agreement;

WHEREAS, the Parties desire to enter into this Agreement in advance of expiration of the Allocation in order to promote commercial and financial certainty and long term planning by each of the Parties;

WHEREAS, the Parties intend for this Agreement to supersede and terminate the Prior Agreement and provide the terms and conditions for the sale of the Allocation, except as otherwise provided in this Agreement with respect to certain supplemental commitments of the Customer under the Prior Agreement;

WHEREAS, execution of this Agreement shall cause service hereunder to be subject to the rates and other terms and conditions of Service Tariff No. WNY-2 as provided for in this Agreement;

WHEREAS, the Authority has complied with requirements of PAL § 1009, and has been

authorized to execute the Agreement.

NOW, THEREFORE, in consideration of mutual covenants, terms, and conditions herein, and for other good and valuable consideration, the receipt and adequacy of which the Parties hereby acknowledge, the Parties do hereby mutually covenant and agree as follows:

ARTICLE I **DEFINITIONS**

When used with initial capitalization, whether singular or plural, the following terms, as used in this Agreement, shall have the meanings as set forth below. When used with initial capitalization, whether singular or plural, terms defined in schedules or appendices to this Agreement shall have the meanings set forth in such schedules or appendices.

“Adverse Water Condition” means any event or condition, including without limitation a hydrologic or hydraulic condition, that relates to the flow, level, or usage of water at or in the vicinity of the Project and/or its related facilities and structures, and which prevents, threatens to prevent, or causes the Authority to take responsive action that has the effect of preventing, the Project from producing a sufficient amount of energy to supply the full power and energy requirements of firm power and firm energy customers who are served by the Project.

“Agreement” means this Agreement, and unless otherwise indicated herein, includes all schedules, appendices and addenda thereto, as the same may be amended from time to time.

“Allocation” refers to the allocation(s) of EP and/or RP awarded to the Customer as specified in Schedule A.

“Alternative REC Compliance Program” has the meaning provided in Schedule E.

“Annual Capital Investment Commitment” has the meaning set forth in Schedule B.

“Annual CI Expenditures” has the meaning set forth in Schedule B.

“Base Employment Level” has the meaning set forth in Schedule B.

“Contract Demand” is as defined in Service Tariff No. WNY-2.

“Customer-Arranged Energy” means energy that the Customer procures from sources other than the Authority for the purpose of replacing Firm Energy that is not supplied to the Customer due to a Planned Hydropower Curtailment.

“Effective Date” means the date that this Agreement is fully executed by the Parties.

“Electric Service” is the Firm Power and Firm Energy associated with the Allocation and sold by the Authority to the Customer in accordance with this Agreement, Service Tariff No. WNY-2 and the Rules.

“Energy Services” has the meaning set forth in Article V of this Agreement.

“Expansion Power” (or “EP”) is 250 MW of Firm Power and associated Firm Energy from the Project eligible to be allocated by the Authority for sale to businesses pursuant to PAL § 1005(13).

“Expansion Project” has the meaning set forth in Section IV.3.a of this Agreement.

“Expansion Project Capital Investment Commitment” has the meaning set forth in Schedule B.

“Facility” means the Customer’s facilities as described in Schedule A to this Agreement.

“Firm Power” is as defined in Service Tariff No. WNY-2.

“Firm Energy” is as defined in Service Tariff No. WNY-2.

“FERC” means the Federal Energy Regulatory Commission (or any successor organization).

“FERC License” means the first new license issued by FERC to the Authority for the continued operation and maintenance of the Project, pursuant to Section 15 of the Federal Power Act, which became effective September 1, 2007 after expiration of the Project’s original license which became effective in 1957.

“Hydro Projects” is a collective reference to the Project and the Authority’s St. Lawrence-FDR Project, FERC Project No. 2000.

“International Joint Commission” or “IJC” refers to the entity with responsibility to prevent and resolve disputes between the United States of America and Canada under the *1909 Boundary Waters Treaty* and pursues the common good of both countries as an independent and objective advisor to the two governments. The IJC rules upon applications for approval of projects affecting boundary or transboundary waters and may regulate the operation of these projects.

“Load Reduction” has the meaning set forth in Section IX.6 of this Agreement.

“Load Serving Entity” (or “LSE”) means an entity designated by a retail electricity customer (including the Customer) to provide capacity, energy and ancillary services to serve such customer, in compliance with NYISO Tariffs, rules, manuals and procedures.

“Metering Arrangement” has the meaning set forth in Section II.8 of this Agreement.

“NYEM” means the New York Energy Manager, an energy management center owned and operated by the Authority.

“NYEM Agreement” means a written agreement between the Authority and the Customer providing for the Facility’s enrollment and Customer’s participation in NYEM.

“NYEM Participation” has the meaning specified in Schedule B of this Agreement.

“NYISO” means the New York Independent System Operator or any successor organization.

“NYISO Charges” has the meaning set forth in Section VII.3 of this Agreement.

“NYISO Tariffs” means the NYISO’s Open Access Transmission Tariff or the NYISO’s Market Administration and Control Area Services Tariff, as applicable, as such tariffs are modified from time to time, or any successor to such tariffs.

“Planned Hydropower Curtailment” means a temporary reduction in Firm Energy to which the Customer is entitled to receive under this Agreement made by the Authority in response to an anticipated or forecasted Adverse Water Condition.

“Physical Energy Audit” or “Audit” means a physical evaluation of the Facility in a manner approved by the Authority that includes at a minimum the following elements: (a) an assessment of the Facility’s energy use, cost and efficiency which produces an energy utilization index for the Facility (such as an Energy Use Intensity or Energy Performance Indicator); (b) a comparison of the Facility’s index to indices for similar buildings/facilities; (c) an analysis of low-cost/no-cost measures for improving energy efficiency; (d) a listing of potential capital improvements for improving energy consumption; and (e) an initial assessment of potential costs and savings from such measures and improvements.

“Prior Agreement” has the meaning set forth in the recitals to this Agreement.

“Project” means the Niagara Power Project, FERC Project No. 2216.

“Replacement Power” (or “RP”) is 445 MW of Firm Power and associated Firm Energy from the Project eligible to be allocated by the Authority for sale to businesses pursuant to PAL § 1005(13).

“Reporting Year” means the yearly interval that the Authority uses for reporting, compliance and other purposes as specified in this Agreement. The Reporting Year for this Agreement is from January 1 through December 31, subject to change by the Authority without notice.

“Rolling Average” has the meaning set forth in Schedule B.

“Rules” are the applicable provisions of Authority’s rules and regulations (Chapter X of Title 21 of the Official Compilation of Codes, Rules and Regulations of the State of New York), as may be modified from time to time by the Authority.

“Service Information” has the meaning set forth in Section II.12 of this Agreement.

“Service Tariff No. WNY-2” means the Authority’s Service Tariff No. WNY-2, as may be modified from time to time by the Authority, which contains, among other things, the rate

schedule establishing rates and other commercial terms for sale of Electric Service to Customer under this Agreement.

“Schedule A” refers to the Schedule A entitled “Expansion Power and/or Replacement Power Allocations” which is attached to and made part of this Agreement.

“Schedule B” refers to the Schedule B entitled “Supplemental Expansion Power and/or Replacement Power Commitments” which is attached to and made part of this Agreement, including any appendices attached thereto.

“Schedule C” refers to the Schedule C entitled “Takedown Schedule” which is attached to and made part of this Agreement.

“Schedule D” refers to the Schedule D entitled “Zero Emission Credit Charge” which is attached to and made part of this Agreement.

“Schedule E” refers to the Schedule E entitled “Monthly Renewable Energy Credit Charge” which is attached to and made part of this Agreement.

“Substitute Energy” means energy that is provided to the Customer by or through the Authority for the purpose of replacing Firm Energy that is not supplied to the Customer due to a Planned Hydropower Curtailment or an Unplanned Hydropower Curtailment.

“Takedown” means the portion of the Allocation that Customer requests to be scheduled for a specific period as provided for in Schedule C, if applicable.

“Taxes” is as defined in Service Tariff No. WNY-2.

“Unforced Capacity” (or “UCAP”) means the electric capacity required to be provided by LSEs to serve electric load as defined by the NYISO Tariffs, rules, manuals and procedures.

“Unplanned Hydropower Curtailment” means a temporary reduction in the amount of Firm Energy to which the Customer is entitled to receive under this Agreement due to Adverse Water Condition that the Authority did not anticipate or forecast.

“Utility Tariff” means the retail tariff(s) of the Customer’s local electric utility filed and approved by the PSC applicable to the delivery of EP and/or RP.

ARTICLE II **ELECTRIC SERVICE**

1. The Authority shall make available Electric Service to enable the Customer to receive the Allocation in accordance with this Agreement, Service Tariff No. WNY-2 and the Rules.
2. The Customer shall not be entitled to receive Electric Service under this Agreement for any EP and/or RP allocation unless such EP and/or RP allocation is identified in Schedule A.

3. The Authority will provide, and the Customer shall accept and pay for, Electric Service with respect to the Allocation specified in Schedule A. If Schedule C specifies a Takedown Schedule for the Allocation, the Authority will provide, and the Customer shall accept and pay for, Electric Service with respect to the Allocation in accordance with such Takedown Schedule.
4. The Authority shall provide UCAP in amounts necessary to meet the Customer's NYISO UCAP requirements associated with the Allocation in accordance with the NYISO Tariffs. The Customer shall be responsible to pay the Authority for such UCAP in accordance with Service Tariff No. WNY-2.
5. The provision of Electric Service associated with the Allocation is an unbundled service separate from the transmission and delivery of power and energy to the Customer. The Customer acknowledges and agrees that Customer's local electric utility, not the Authority, shall be responsible for delivering the Allocation to the Facility specified in Schedule A in accordance with the applicable Utility Tariff(s).
6. The Contract Demand for the Customer's Allocation may be modified by the Authority if the amount of Firm Power and Firm Energy available for sale as EP or RP from the Project is modified as required to comply with any ruling, order, or decision of any regulatory or judicial body having jurisdiction, including but not limited to FERC. Any such modification will be made on a pro rata basis to all EP and RP customers, as applicable, based on the terms of such ruling, order, or decision.
7. The Contract Demand may not exceed the Allocation.
8. The Customer's Facility must be metered by the Customer's local electric utility in a manner satisfactory to the Authority, or another metering arrangement satisfactory to the Authority must be provided (collectively, "Metering Arrangement"). A Metering Arrangement that is not satisfactory to the Authority shall be grounds, after notice to the Customer, for the Authority to modify, withhold, suspend, or terminate Electric Service to the Customer. If a Metering Arrangement is not made to conform to the Authority's requirements within thirty (30) days of a determination that it is unsatisfactory, the Authority may modify, withhold, suspend, or terminate Electric Service on at least ten (10) days' prior written notice to the Customer. After commencement of Electric Service, the Customer shall notify the Authority in writing within thirty (30) days of any alteration to the Facility's Metering Arrangement, and provide any information requested by the Authority (including Facility access) to enable the Authority to determine whether the Metering Arrangement remains satisfactory. If an altered Metering Arrangement is not made to conform to the Authority's requirements within thirty (30) days of a determination it is unsatisfactory, the Authority may modify, withhold, suspend, or terminate Electric Service on at least ten (10) days' prior written notice to the Customer. The Authority may, in its discretion, waive any of the requirements provided for in this Section in whole or in part where in the Authority's judgment, another mechanism satisfactory to the Authority can be implemented to enable the Authority to receive pertinent, timely and accurate information relating to the Customer's energy consumption and demand and render bills to the Customer for all fees, assessments and charges that become due in accordance with this Agreement, Service Tariff No. WNY-2, and the Rules.

9. The Customer consents to the exchange of information between the Authority and the Customer's local electric utility pertaining to the Customer that such parties determine is necessary to provide for the allocation, sale and delivery of the Allocation to the Customer, the proper and efficient implementation of the EP and/or RP program, billing related to Electric Service, and/or the performance of such parties' obligations under any contracts or other arrangements between them relating to such matters. In addition, the Customer agrees to complete such forms and consents that the Authority determines are necessary to effectuate such exchanges of information.
10. The provision of Electric Service by the Authority shall be dependent upon the existence of a written agreement between the Authority and the Customer's local electric utility providing for the delivery of the Allocation on terms and conditions that are acceptable to the Authority.
11. The Customer understands and acknowledges that the Authority may from time to time require the Customer to complete forms, execute consents, and provide information (collectively, "Service Information") that the Authority determines is necessary for the provision of Electric Service, the delivery of the Allocation, billing related to Electric Service, the effective administration of the EP and/or RP programs, and/or the performance of contracts or other arrangements between the Authority and the Customer's local electric utility. The Customer's failure to provide Service Information on a timely basis shall be grounds for the Authority in its discretion to modify, withhold, suspend, or terminate Electric Service to the Customer.

ARTICLE III

RATES, TERMS AND CONDITIONS

1. Electric Service shall be sold to the Customer in accordance with the rates, terms and conditions provided for in this Agreement, Service Tariff No. WNY-2 and the Rules. The Authority agrees to waive the Minimum Monthly Charge set forth in Service Tariff No. WNY-2 for a period up to one (1) year upon written request from the Customer that is accompanied by information that demonstrates to the Authority's satisfaction a short-term reduction or interruption of Facility operations due to events beyond the Customer's control. The Customer shall provide such information that the Authority requests during the period of any such waiver to enable the Authority to periodically evaluate the ongoing need for such waiver.
2. If the Authority at any time during the term of this Agreement enters into an agreement with another customer for the sale of EP or RP at power and energy rates that are more advantageous to such customer than the power and energy rates provided in this Agreement and Service Tariff No. WNY-2, then the Customer, upon written request to the Authority, will be entitled to such more advantageous power and energy rates in the place of the power and energy rates provided in this Agreement and Service Tariff No. WNY-2 effective from the date of such written request, provided, however, that the foregoing provision shall not apply to:

- a. any Prior Agreement for the sale of EP and/or RP with an Authority customer who has declined the Authority's offer to enter into a form of agreement for the sale of EP and/or RP that is associated with Service Tariff No. WNY-2; or
 - b. any agreement for the sale of EP and/or RP with an Authority customer which is associated with such customer's participation in an Alternative REC Compliance Program provided for in Schedule E of this Agreement.
3. Notwithstanding any provision of this Agreement to the contrary, the power and energy rates for Electric Service shall be subject to increase by Authority at any time upon 30 days prior written notice to Customer if, after consideration by Authority of its legal obligations, the marketability of the output or use of the Project and Authority's competitive position with respect to other suppliers, Authority determines in its discretion that increases in rates obtainable from any other Authority customers will not provide revenues, together with other available Authority funds not needed for operation and maintenance expenses, capital expenses, and reserves, sufficient to meet all requirements specified in Authority's bond and note resolutions and covenants with the holders of its financial obligations. Authority shall use its best efforts to inform Customer at the earliest practicable date of its intent to increase the power and energy rates pursuant to this provision. With respect to any such increase, Authority shall forward to Customer with the notice of increase, an explanation of all reasons for the increase, and shall also identify the sources from which Authority will obtain the total of increased revenues and the bases upon which Authority will allocate the increased revenue requirements among its customers. Any such increase in rates shall remain in effect only so long as Authority determines such increase is necessary to provide revenues for the purposes stated in the preceding sentences.
4. In addition to all other fees, assessments and charges provided for in the Agreement, Service Tariff WNY-2 and the Rules, the Customer shall be responsible for payment of the Zero Emission Credit Charge and Monthly Renewable Energy Credit Charge provided for in Schedule D and Schedule E, respectively, of this Agreement.

ARTICLE IV

SUPPLEMENTAL COMMITMENTS

1. Supplemental Commitments. Schedule B sets forth the Customer's "Supplemental Expansion Power and/or Replacement Power Commitments" ("Supplemental Commitments"). The Authority's obligation to provide Electric Service under this Agreement is expressly conditioned upon the Customer's timely compliance with the Supplemental Commitments described in Schedule B as further provided in this Agreement. The Customer's Supplemental Commitments are in addition to all other commitments and obligations provided in this Agreement.
2. Supplemental Commitments and Compliance – Reporting Years 2017 and 2018. The Customer's supplemental commitments for Reporting Years 2017 and 2018 provided in the Prior Agreement shall survive the termination of the Prior Agreement and shall be enforceable by the Authority on the terms and conditions provided for in the Prior Agreement.

3. Special Provisions Relating to a New or Expanded Facility.

a. Proposed New or Expanded Facility; Failure to Complete.

If Schedule B provides for the construction of a new facility or an expansion of an existing facility (collectively, “Expansion Project”), and the Customer fails to complete the Expansion Project by the date specified in Schedule B, the Authority may, in its discretion, (a) cancel the Allocation, or (b) if it believes that the Expansion Project will be completed in a reasonable time, agree with the Customer to extend the time for completion of the Expansion Project.

b. Proposed New or Expanded Facility; Partial Performance.

If the Expansion Project results in a completed Facility that is only partially operational, or is material different than the Expansion Project agreed to in Schedule B (as measured by such factors as size, capital investment expenditures, capital improvements, employment levels, estimated energy demand and/or other criteria determined by the Authority to be relevant), the Authority may, in its discretion, on its own initiative or at the Customer’s request, make a permanent reduction to the Allocation and Contract Demand to an amount that the Authority determines to fairly correspond to the completed Facility.

c. Notice of Completion; Commencement of Electric Service.

- (i) The Customer shall give the Authority not less than ninety (90) days' advance written notice of the anticipated date of completion of an Expansion Project. The Authority will inspect the Expansion Project for the purpose of verifying the status of the Expansion Project and notify Customer of the results of the inspection. The Authority will thereafter commence Electric Service within a reasonable time subject to the other provisions of this Agreement based on applicable operating procedures of the Authority, Customer’s local electric utility and NYISO.
- (ii) In the event of an Expansion Project being completed in multiple phases, at the Customer’s request the Authority may, in its discretion, allow commencement of part of the Allocation upon completion of any such phase, provided the Authority will similarly inspect the Expansion Project for the purpose of verifying the status of the completed phase of the Expansion Project. Upon such verification by the Authority of any such completed phase, the Authority, in its discretion, will determine an amount of kW that fairly corresponds to the completed phase of the Expansion Project, taking into account relevant criteria such as any capital expenditures, increased employment levels, and/or increased electrical demand associated with the completed phase of the Expansion Project.

d. Other Rights and Remedies Unaffected.

Nothing in this Article is intended to limit the Authority's rights and remedies provided for in the other provisions of this Agreement, including without limitation the provisions in Schedule B of this Agreement.

ARTICLE V

ENERGY-RELATED PROJECTS, PROGRAMS AND SERVICES

The Authority shall periodically communicate with the Customer for the purpose of informing the Customer about energy-related projects, programs and services ("Energy Services") offered by the Authority that in the Authority's view could provide value to the Customer and/or support the State's Clean Energy Standard. The Customer shall review and respond to all such offers in good faith, provided, however, that, except as otherwise provided for in this Agreement, participation in any such Energy Services shall be at the Customer's option, and subject to such terms and conditions agreed to by the Parties in one or more definitive agreements.

ARTICLE VI

SERVICE TARIFF; CONFLICTS

1. A copy of Service Tariff No. WNY-2 in effect upon the execution of this Agreement is attached to this Agreement as Exhibit 1, and will apply under this Agreement with the same force and effect as if fully set forth herein. The Customer consents to the application of Service Tariff WNY-2. Service Tariff No. WNY-2 is subject to revision by the Authority from time to time, and if revised, the revised provisions thereof will apply under this Agreement with the same force and effect as if set forth herein. The Authority shall provide the Customer with prior written notice of any revisions to Service Tariff No. WNY-2.
2. In the event of any inconsistencies, conflicts, or differences between the provisions of Service Tariff No. WNY-2 and the Rules, the provisions of Service Tariff No. WNY-2 shall govern. In the event of any inconsistencies, conflicts or differences between the provisions of this Agreement and Service Tariff No. WNY-2 or the Rules, the provisions of this Agreement shall govern.

ARTICLE VII

TRANSMISSION AND DELIVERY

1. The Customer shall be responsible for:
 - a. complying with all requirements of its local electric utility (including any other interconnecting utilities) that are necessary to enable the Customer to receive delivery service for the Allocation. Delivery of the Allocation shall be subject to the Utility Tariff;
 - b. paying its local electric utility for delivery service associated with the Allocation in accordance with the Utility Tariff, and if the Authority incurs any charges associated with such delivery service, reimbursing the Authority for all such charges; and
 - c. obtaining any consents and agreements from any other person that are necessary for the delivery of the Allocation to the Facility, and complying with the requirements of any

such person, provided that any such consents, agreements and requirements shall be subject to the Authority's approval.

2. The Authority will use good faith efforts to provide the Customer with at least one year's advance notice of the scheduled expiration of Historic Fixed Price Transmission Congestion Contracts. After issuance of any such notice, the Authority will make itself available at reasonable times to collaborate with the Customer and other EP and RP customers to discuss potential risk-hedging options that might be available following expiration of such contracts.
3. The Customer understands and acknowledges that delivery of the Allocation will be made over transmission facilities under the control of the NYISO. The Authority will act as the LSE with respect to the NYISO, or arrange for another entity to do so on the Authority's behalf. The Customer agrees and understands that it shall be responsible to the Authority for all costs incurred by the Authority with respect to the Allocation for the services established in the NYISO Tariff, or other applicable tariff ("NYISO Charges"), as set forth in Service Tariff No. WNY-2 or any successor service tariff, regardless of whether such NYISO Charges are transmission-related.
4. The Authority will consider opportunities to assist the Customer concerning actions, practices, or procedures of the Customer's local electric utility identified by the Customer that could adversely impact the implementation and effectiveness of the EP and RP programs, provided that whether or not to take any action or adopt any position on any issue, including any adverse position, is within the Authority's discretion and further subject to applicable laws, regulations and existing legal obligations.

ARTICLE VIII

BILLING AND BILLING METHODOLOGY

1. The billing methodology for the Allocation shall be determined on a "load factor sharing" basis in a manner consistent with the Utility Tariff and any agreement between the Authority and the Customer's local electric utility. An alternative basis for billing may be used provided the Parties agree in writing and the local electric utility provides its consent if such consent is deemed necessary.
2. All other provisions with respect to billing are set forth in Service Tariff No. WNY-2 and the Rules.
3. The rights and remedies provided to the Authority in this Article are in addition to any and all other rights and remedies available to Authority at law or in equity.

ARTICLE IX

HYDROPOWER CURTAILMENTS AND SUBSTITUTE ENERGY

1. The Customer shall, on a form provided by the Authority, elect to either (a) purchase Substitute Energy from the Authority, or (b) rely on Customer-Arranged Energy, for the purpose of replacing Firm Energy that is not supplied to the Customer due to a Planned Hydropower Curtailment. The Customer shall make its election in accordance with the time

period and other requirements prescribed in such form. The election shall apply for the entire calendar year identified in the form.

2. The Customer may change its election on a form provided by the Authority by giving the Authority notice of such change no later than the first day of November preceding the calendar year to which the Customer intends such change to become effective. Such change shall be effective on the first day of January following the Authority's receipt the Customer's notice and shall remain in effect unless it is changed in accordance with the provisions of this Section IX.1.
3. In the event of an anticipated or planned Adverse Water Condition, the Authority will have the right in its discretion to implement Planned Hydropower Curtailments. The Authority will implement Planned Hydropower Curtailments on a non-discriminatory basis as to all Authority customers that are served by the Project. The Authority will provide the Customer with advance notice of Planned Hydropower Curtailments that in the Authority's judgment will impact Electric Service to the Customer no later than the tenth business day of the month prior to the month in which the Planned Hydropower Curtailment is expected to occur unless the Authority is unable to provide such notice due to the circumstances that impede such notice, in which case the Authority will provide such advance notice that is practicable under the circumstances.
4. If the Customer elected to purchase Substitute Energy from the Authority, the Authority shall provide Substitute Energy to the Customer during all Planned Hydropower Curtailments. Unless otherwise agreed upon by the Parties in writing, Substitute Energy shall be sourced from markets administered by the NYISO. The Authority may require the Customer to enter into one or more separate agreements to facilitate the provision of Substitute Energy to the Customer.
5. If the Customer elected to rely on Customer-Arranged Energy, the Authority shall have no responsibility to provide the Customer with Substitute Energy during any Planned Hydropower Curtailment, and the Customer shall be responsible for the procurement, scheduling, delivery and payment of all costs associated with Customer-Arranged Energy.
6. The Customer shall have the right to reduce its load in response to a Planned Hydropower Curtailment (a "Load Reduction"), provided, however, that the Customer shall, on an Authority form, provide the Authority with no less than seven (7) days' advance notice of the time period(s) during when the Load Reduction will occur, the estimated amount of the Load Reduction (demand and energy), and all other information required by such form. The Authority will confirm whether the notice provides the required information and proposed Load Reduction has been accepted. The Customer shall reimburse the Authority for all costs that the Authority incurs as a result of the Customer's failure to provide such notice.
7. In the event of an Adverse Water Condition that the Authority did not anticipate or forecast, the Authority shall have the right in its discretion to implement Unplanned Hydropower Curtailments. The Unplanned Hydropower Curtailments will be implemented on a non-discriminatory basis as to all Authority customers that are served by the Project.

8. The Authority will provide the Customer with notice of Unplanned Hydropower Curtailments that in the Authority's judgment will impact Electric Service to the Customer within five (5) business days after the first occurrence of an Unplanned Hydropower Curtailment that occurs within a month, and thereafter will provide the Customer with reasonable notice under the circumstances of the potential for any other Unplanned Hydropower Curtailments that are expected to occur within such month or beyond. The Authority will give the Customer notice of any Unplanned Hydropower Curtailments that the Authority believes are likely to exceed forty-eight (48) continuous hours in duration.
9. Notwithstanding the Customer's election pursuant to Section IX.1, the Authority shall provide the Customer with Substitute Energy during Unplanned Hydropower Curtailments.
10. For each kilowatt-hour of Substitute Energy provided by the Authority during a Planned Hydropower Curtailment, the Customer shall pay the Authority directly during the billing month: (1) the difference between the market cost of the Substitute Energy and the charge for firm energy as provided for in this Agreement; and (2) any NYISO charges and taxes the Authority incurs in connection with the provision of such Substitute Energy. Unless otherwise agreed upon by the Parties in writing, billing and payment for Substitute Energy provided for Planned Hydropower Curtailments shall be governed by the provisions of Service Tariff WNY-2 relating to the rendition and payment of bills for Electric Service.
11. The Customer shall be responsible for all costs associated with the Authority's provision of Substitute Energy during Unplanned Hydropower Curtailments. Unless otherwise agreed upon by the Parties in writing, billing and payment for Substitute Energy provided for Unplanned Hydropower Curtailments shall be governed by the provisions of Service Tariff WNY-2 relating to the rendition and payment of bills for Electric Service.
12. The Authority shall be under no obligation to deliver and will not deliver any such curtailed energy to the Customer in later billing periods.

ARTICLE X

EFFECTIVENESS, TERM AND TERMINATION

1. This Agreement shall become effective and legally binding on the Parties on the Effective Date.
2. Once commenced, Electric Service under the Agreement shall continue until the earliest of:
(a) termination by the Customer with respect to its Allocation upon ninety (90) days prior written notice to the Authority; (b) termination by the Authority pursuant to this Agreement, Service Tariff No. WNY-2, or the Rules; or (c) expiration of the Allocation by its own term as specified in Schedule A.
3. The Customer may exercise a partial termination of the Allocation upon at least sixty (60) days' prior written notice to the Authority. The Authority will effectuate the partial termination as soon as practicable after receipt of such notice taking account of the Authority's internal procedures and requirements of the Customer's local electric utility.

4. The Authority may cancel service under this Agreement or modify the quantities of Firm Power and Firm Energy associated with the Allocation: (1) if such cancellation or modification is required to comply with any final ruling, order or decision of any regulatory or judicial body of competent jurisdiction (including any licensing or re-licensing order or orders of the FERC or its successor agency); or (2) as otherwise provided in this Agreement, Service Tariff No. WNY-2, or the Rules.

ARTICLE XI

EXTENSIONS OF ALLOCATION; AWARD OF ADDITIONAL ALLOCATIONS

1. The Customer may apply to the Authority for an extension of the term of the Allocation identified in Schedule A:
 - a. during the thirty-six (36) month period immediately preceding the scheduled expiration of the Allocation;
 - b. pursuant to any other process that the Authority establishes; or
 - c. with the Authority's written consent.
2. Upon proper application by the Customer, the Authority may in accordance with applicable law and Authority procedures award additional allocations of EP and/or RP to the Customer at such rates and on such terms and conditions as the Authority establishes. If the Customer agrees to purchase Electric Service associated with any such additional allocation, the Authority will (a) incorporate any such additional allocations into Schedule A, or in its discretion will produce a supplemental schedule, to reflect any such additional allocations, and (b) produce a modified Appendix to Schedule B, as the Authority determines to be appropriate. The Authority will furnish the Customer with any such modified Schedule A, supplemental schedule, and/or a modified Appendix to Schedule B, within a reasonable time after commencement of Electric Service for any such additional allocation.
3. In addition to any requirements imposed by law, the Customer hereby agrees to furnish such documentation and other information as the Authority requests to enable the Authority to evaluate any requests for extension of the Allocation or additional allocations and consider the terms and conditions that should be applicable of any extension or additional allocations.

ARTICLE XII

NOTICES

1. Notices, consents, authorizations, approvals, instructions, waivers or other communications provided in this Agreement shall be in writing and transmitted to the Parties as follows:

To: The Authority

New York Power Authority
123 Main Street
White Plains, New York 10601
Email:

Facsimile: _____

Attention: Manager – Business Power Allocations and Compliance

To: The Customer

<Customer Legal Name>

<Customer Address>

Email:

Facsimile:

Attention:

2. The foregoing notice/notification information pertaining to either Party may be changed by such Party upon notification to the other Party pursuant to Section XII.1.
3. Except where otherwise herein specifically provided, any notice, communication or request required or authorized by this Agreement by either Party to the other shall be deemed properly given: (a) if sent by U.S. First Class mail addressed to the Party at the address set forth above; (b) if sent by a nationally recognized overnight delivery service, two (2) calendar days after being deposited for delivery to the appropriate address set forth above; (c) if delivered by hand, with written confirmation of receipt; (d) if sent by facsimile to the appropriate fax number as set forth above, with written confirmation of receipt; or (e) on the date of transmission if sent by electronic communication to the appropriate address as set forth above, with confirmation of receipt. Either Party may change the addressee and/or address for correspondence sent to it by giving written notice in accordance with the foregoing.

ARTICLE XIII

SUCCESSORS AND ASSIGNS; RESALE OF HYDROPOWER

1. This Agreement shall be binding upon, shall inure to the benefit of, and may be performed by, the legal successors and assigns of either Party hereto, provided that no assignment by either Party or any successor or assignee of such Party of its rights and obligations hereunder shall be made or become effective without the prior written consent of the other Party, which consent shall not be unreasonably withheld or conditioned. Notwithstanding the foregoing sentence, the Authority may require such approvals, and such consents and other agreements from the Customer and other parties, that the Authority determines are necessary in order to effectuate any such assignment.
2. The Customer may not transfer any portion of the Allocation to any other person, or a location different than the Facility, unless: (a) the Authority in its discretion authorizes the transfer Authority; (b) all other requirements applicable to a transfer, including board approvals, are satisfied; and (c) the transfer is effectuated in a form and subject to such terms and conditions approved by the Authority. Any purported transfer that does not comply with the foregoing requirements shall be invalid and constitute grounds for the Authority in its discretion to suspend Electric Service or terminate the Allocation and/or this Agreement.

3. The Customer may not sell any portion of the Allocation to any other person. Any purported sale shall be invalid and constitute grounds for the Authority in its discretion to suspend Electric Service, or terminate the Allocation and/or this Agreement.

ARTICLE XIV

MISCELLANEOUS

1. **Choice of Law**

This Agreement shall be governed by and construed in accordance with the laws of the State of New York to the extent that such laws are not inconsistent with the FERC License and the Niagara Redevelopment Act (16 USC §§836, 836a) and rulings by the IJC and without regard to conflicts of law provisions.

2. **Venue**

The Parties: (a) consent to the exclusive jurisdiction and venue of any state court within or for Albany County, New York, with subject matter jurisdiction for adjudication of any claim, suit, action or any other proceeding in law or equity arising under, or in any way relating to this Agreement; (b) agree to accept service of process; and (c) will not raise any argument of inconvenient forum.

3. **Previous Agreements; Modifications; and Interpretation**

- a. Subject to paragraph b of this Section, this Agreement shall constitute the sole and complete agreement of the Parties hereto with respect to the sale of the Allocation and the subject matter of the Agreement, and supersedes all previous communications and agreements between the Parties, oral or written, with reference to the sale of the Allocation.
- b. The Prior Agreement is superseded and terminated effective as of the Effective Date of this Agreement, provided, however, that: (i) the Customer shall remain liable to the Authority for all duties, liabilities, charges and obligations due in accordance with the Prior Agreement that have accrued prior to the Effective Date; and (ii) the Parties' rights and obligations concerning the Customer's supplemental commitments under the Prior Agreement for reporting years 2017 and 2018 shall remain in full force and effect and shall be enforceable by the Authority on the basis of the terms and conditions provided for in the Prior Agreement.
- c. No modifications of this Agreement shall be binding upon the Parties hereto or either of them unless such modification is in writing and is signed by a duly authorized officer of each of them.
- d. No provision shall be construed against a Party on the basis that such Party drafted such provision.

4. **Waiver**

Any waiver at any time by either the Authority or the Customer of their rights with respect to a default or of any other matter arising out of this Agreement shall not be deemed to be a waiver with respect to any other default or matter. No waiver by either Party of any rights with respect to any matter arising in connection with this Agreement shall be effective unless made in writing and signed by the Party making the waiver.

5. Severability and Voidability

If any term or provision of this Agreement shall be invalidated, declared unlawful or ineffective in whole or in part by an order of the FERC or a court of competent jurisdiction, such order shall not be deemed to invalidate the remaining terms or provisions hereof. Notwithstanding the preceding sentence, if any provision of this Agreement is rendered void or unenforceable or otherwise modified by a court or agency of competent jurisdiction, the entire Agreement shall, at the option of either Party and only in such circumstances in which such Party's interests are materially and adversely impacted by any such action, be rendered void and unenforceable by such affected Party.

ARTICLE XV
EXECUTION

To facilitate execution, this Agreement may be executed in as many counterparts as may be required, and it shall not be necessary that the signatures of, or on behalf of, each Party, or that the signatures of all persons required to bind any Party, appear on each counterpart; but it shall be sufficient that the signature of, or on behalf of, each Party, or that the signatures of the persons required to bind any Party, appear on one or more of the counterparts. All counterparts shall collectively constitute a single agreement. It shall not be necessary in making proof of this Agreement to produce or account for more than a number of counterparts containing the respective signatures of, or on behalf of, all of the Parties hereto. The delivery of an executed counterpart of this Agreement as a PDF or similar file type transmitted via electronic mail, cloud based server, e-signature technology or similar electronic means shall be legal and binding and shall have the same full force and effect as if an original executed counterpart of this Agreement had been delivered.

[SIGNATURES FOLLOW ON NEXT PAGE]

AGREED:

<Customer Legal Name>

By: _____

Title: _____

Date: _____

AGREED:

POWER AUTHORITY OF THE STATE OF NEW YORK

By: _____
John R. Koelmel, Chairman

Date: _____

SCHEDULE A
EXPANSION POWER AND/OR REPLACEMENT POWER ALLOCATIONS

Customer: <Customer Legal Name>				
Type of Allocation	Allocation Amount (kW)	Facility and Address	<Trustee Approval Date>	Allocation Expiration Date
<Power Type (EP/RP)>	<Allocation Amount>	<Facility Address>, NY <Facility Zipcode>		December 31, 2028

SCHEDULE B
SUPPLEMENTAL EXPANSION POWER AND/OR REPLACEMENT POWER
COMMITMENTS

ARTICLE I
SPECIFIC SUPPLEMENTAL COMMITMENTS

1. Employment Commitments

- a. The Customer shall create and maintain the employment level set forth in the Appendix to this Schedule B (the “Base Employment Level”). Such Base Employment Level shall be the total number of full-time positions held by: (a) individuals who are employed by the Customer at Customer’s Facility identified in the Appendix to this Schedule, and (b) individuals who are contractors or who are employed by contractors of the Customer and assigned to the Facility identified in such Appendix (collectively, “Base Level Employees”). The number of Base Level Employees shall not include individuals employed on a part-time basis (less than 35 hours per week); provided, however, that two individuals each working 20 hours per week or more at such Facility shall be counted as one Base Level Employee.
- b. The Base Employment Level shall not be created or maintained by transfers of employees from previously held positions with the Customer or its affiliates within the State of New York, except that the Base Employment Level may be filled by employees of the Customer laid off from other Customer facilities for *bona fide* economic or management reasons.
- c. The Authority may consider a request to change the Base Employment Level based on a claim of increased productivity, increased efficiency or adoption of new technologies or for other appropriate reasons as determined by the Authority. Any such change shall be within Authority’s discretion.

2. Capital Investment Commitments

The Customer shall make the capital investments specified in the Appendix to this Schedule B.

3. Power Utilization

For each month the Authority provides Electric Service to the Customer, the Customer shall utilize the entire Allocation, as represented by the Billing Demand (as such term is described in Service Tariff No. WNY-2), provided, however, that if only part of the Allocation is being utilized in accordance with Schedule C, the Customer shall utilize such partial amount of the Allocation.

4. Energy Efficiency and Conservation Program

- a. The Customer shall implement an energy efficiency and conservation program at the Facility through either (a) enrollment of the Facility and participation in NYEM in accordance with a NYEM Agreement, or (b) one or more Physical Energy Audits of the Facility, or (c) a combination of such measures, in accordance with the provisions of this Article.
- b. The Authority shall transmit to the Customer a NYEM Agreement and an election form. The Customer shall elect to either (a) enroll the Facility and participate in NYEM for a three-year term (“NYEM Participation”) in accordance with the NYEM Agreement, or (b) perform a Physical Energy Audit of the Facility. The Customer shall make the election within sixty (60) days of its receipt of the Authority’s communication. If the Customer elects NYEM Participation, it shall execute and return the NYEM Agreement to the Authority with the election form, abide by the NYEM Agreement, and participate in NYEM at its own expense at the rate provided in the NYEM Agreement. If the Customer elects to perform a Physical Energy Audit, it shall perform the Physical Energy Audit within three (3) years of the Effective Date of this Agreement, at its own expense.
- c. The Authority shall, on or before the expiration of the three-year term of the NYEM Agreement, transmit to the Customer a NYEM Agreement specifying the terms and conditions that would apply to NYEM participation for a second term, and an election form. The Customer shall elect either (a) NYEM Participation for a second term, or (b) to perform a Physical Energy Audit of the Facility. The Customer shall make the election within sixty (60) days of its receipt of the Authority’s communication. If the Customer elects NYEM Participation, it shall execute and return the NYEM Agreement to the Authority with the election form, abide by the NYEM Agreement, and participate in NYEM at its own expense at the rate provided in the NYEM Agreement. If the Customer elects to perform a Physical Energy Audit, it shall perform the Physical Energy Audit during the calendar year that begins six years after of the Effective Date of this Agreement, at its own expense.
- d. The Authority may in its discretion waive the requirement for a Physical Energy Audit, or may agree to a limited energy audit of the Facility, where it determines that the Physical Energy Audit is unnecessary based on the age of the Facility, energy efficiency and conservation improvements made at the Facility, the length of the Allocation, or other considerations the Authority determines to be relevant.

ARTICLE II
RECORDKEEPING, REPORTING AND FACILITY ACCESS

1. Employment

A record shall be kept monthly by the Customer, and provided on a calendar year basis to the Authority, of the total number of Base Level Employees who are employed at or assigned to the Customer's Facility identified in the Appendix to this Schedule, as reported to the United States Department of Labor (or as reported in such other record as agreed upon by the Authority and the Customer). Such report shall separately identify the individuals who are employed by the Customer, and the individuals who are contractors or who are employed by contractors of the Customer, and shall be certified to be correct by an officer of the Customer, plant manager or such other person authorized by the Customer to prepare and file such report and shall be provided to the Authority on or before the last day of February following the end of the most recent calendar year. The Authority shall have the right to examine and audit on reasonable advance written notice all non-confidential written and electronic records and data concerning employment levels including, but not limited to, personnel records and summaries held by the Customer and its affiliates relating to employment in New York State.

2. Capital Investments

The Customer shall comply with the recordkeeping, recording and reporting requirements specified in the Appendix to this Schedule B.

3. Power Usage

A record shall be kept monthly by the Customer, and provided on a calendar year basis to the Authority on or before the last day of February following the end of the most recent calendar year, of the maximum demand utilized each month in the Facility receiving the power covered by the Agreement.

4. Energy Efficiency and Conservation Program

Upon the Authority's request, the Customer shall provide the Authority with (a) a copy of the results of any Physical Energy Audit performed at the Facility (or, at the Authority's option, a report describing the results), performed pursuant to this Article; and (b) a description of any energy efficiency or conservation measures that the Customer has implemented at the Facility in response to any Physical Energy Audit or as a result of NYEM Participation.

5. Facility Access

Notwithstanding any other provision of the Agreement, the Customer shall provide the Authority with such access to the Facility, and such documentation, as the Authority deems necessary to determine the Customer's compliance with the Customer's Supplemental Commitments specified in this Schedule B.

ARTICLE III

COMPLIANCE ACTION BY THE AUTHORITY

1. Employment

If the year-end monthly average number of employees is less than 90% of the Base Employment Level set forth in the Appendix to this Schedule B for the subject calendar year, the Authority may reduce the Contract Demand in accordance with the procedures provided in Section III.5 of this Schedule. The maximum amount of reduction will be determined by multiplying the Contract Demand by the quantity one minus the quotient of the average monthly employment during the subject calendar year divided by the Base Employment Level. Any such reduction shall be rounded to the nearest fifty (50) kW. In the event of a reduction of the Contract Demand to zero, the Agreement shall automatically terminate.

2. Capital Investment Commitment

The Authority may reduce the Contract Demand as provided in the Appendix to this Schedule B if the Customer does not comply with the Capital Investment Commitment.

3. Power Utilization Level

If the average of the Customer's six (6) highest Billing Demands (as such term is described in Service Tariff No. WNY-2) for Expansion Power and/or Replacement Power is less than 90% of the Customer's Contract Demand in such calendar year the Authority may reduce the Contract Demand subject to in accordance with the procedures provide in Section III.5 of this Schedule. The maximum amount by which the Authority may reduce the Contract Demand shall be determined by multiplying the Contract Demand by the quantity one minus the quotient of the average of the six (6) highest Billing Demands for in such calendar year divided by the Contract Demand. Any such reduction shall be rounded to the nearest fifty (50) kW. In the event of a reduction of the Contract Demand to zero, this Agreement shall automatically terminate.

4. Additional Compliance Action

In addition to the Authority's other rights and remedies provided in this Agreement, Service Tariff WNY-2 and the Rules, the Authority may suspend Electric Service to the Customer if the Customer does not comply with any of the requirements in Section I.4 or Article II of this Schedule B.

5. Notice of Intent to Reduce Contract Demand

In the event that the Authority determines that the Contract Demand will be wholly or partially reduced pursuant to Sections III.1, III.2, or III.3 of this Schedule B, the Authority shall provide the Customer with at least thirty (30) days prior written notice of the proposed reduction, specifying the amount and reason for the reduction. Before implementing any reduction, the Authority may consider the Customer's scheduled or unscheduled maintenance, Facility upgrade periods, and the business cycle. If, at the end of the thirty (30) day notice period, the Authority determines that a reduction is warranted, it shall provide the Customer with notice of such determination and provide the Customer with sixty (60) days to present a proposed plan with actionable milestones to cure the deficiency. The Authority shall respond to the Customer concerning the acceptability of any proposed plan that is provided in accordance with this Section III.5 within thirty (30) days of the Authority's receipt of such proposed plan. It shall be within the Authority's discretion whether or not to accept the Customer's proposed plan, require a different plan, or implement the reduction of the Contract Demand.

APPENDIX TO SCHEDULE B

BASE EMPLOYMENT LEVEL

The Customer shall employ at least ____ full-time employees (“Base Employment Level”) at the Customer’s Facility. The Base Employment Level shall be maintained for the term of the Allocation in accordance with Article I of Schedule B.

CAPITAL INVESTMENT COMMITMENTS

1. **Annual Capital Investment Commitment** (if applicable, as specified below)
 - a. Each Reporting Year, the rolling average of the annual capital investments made by the Customer at the Facility (“Rolling Average”) shall total not less than \$_____ (the “Annual Capital Investment Commitment”). For purposes of this provision, “Rolling Average” means the three-year average comprised of (1) the total amount of capital investments (“Annual CI Expenditures”) made by the Customer at the Facility during the current Reporting Year, and (2) the Annual CI Expenditures made by the Customer at the Facility during the two prior Reporting Years.
 - b. Each year, the Customer shall record its Annual CI Expenditures for purposes of enabling the Authority to determine and verify the Rolling Average, which shall be provided to the Authority in a form specified by the Authority on or before the last day of February following the end of the most recent calendar year.
 - c. If the Customer’s Rolling Average as determined by the Authority is less than 90% of its Annual Capital Investment Commitment for the Reporting Year, the Contract Demand may be reduced by the Authority in accordance with the procedures provided in Section III.5 of this Schedule. The maximum amount by which the Authority may reduce the Contract Demand shall be determined by multiplying the Contract Demand by the quantity one minus the quotient of the Rolling Average divided by the Annual Capital Investment Commitment. Any such reduction shall be rounded to the nearest ten (10) kW. In the event of a reduction of the Contract Demand to zero, this Agreement shall automatically terminate.
2. **Expansion Project–Capital Investment Commitment** (if applicable, as specified below)
 - a. The Customer shall make a minimum capital investment of \$_____ to construct, furnish and/or expand the Facility (“Expansion Project Capital Investment Commitment”). The Expansion Project Capital Investment Commitment is expected to consist of the following approximate expenditures on the items indicated:

Line Item 1 -	\$ _____
Line Item 2 -	\$ _____
Line Item 3 -	\$ _____

Total Expansion Project Capital Investment Commitment:

- b. The Expansion Project Capital Investment Commitment shall be made, and the Facility shall be completed and fully operational, no later than _____ (*i.e.*, within three (3) years of the date of the Authority's award of the Allocation). Upon request of the Customer, such date may be extended in the discretion of the Authority.

SCHEDULE C
TAKEDOWN SCHEDULE

SCHEDULE D
ZERO EMISSION CREDIT CHARGE

I. DEFINITIONS

When used with initial capitalization, whether singular or plural, the following terms, as used in this Schedule, shall have the meanings as set forth below. Capitalized terms not defined in this Schedule shall have the meaning ascribed to them elsewhere in the Agreement, in Service Tariff No. WNY-2, or in the Rules.

“Affected LSEs” has the meaning provided in Section II.2 of this Schedule D.

“CES Order” means the Order issued by the PSC entitled “Order Adopting a Clean Energy Standard, issued on August 1, 2016, in Case Nos. 15-E-0302 and 16-E-0270, and includes all subsequent orders amending, clarifying and/or implementing such Order or the RES.

“EP and RP Programs ZEC Costs” has the meaning provided in Section II.4.b of this Schedule D.

“Government Action” has the meaning provided in Section II.8 of this Schedule D.

“Load Serving Entity” or “LSE” has the meaning provided in the CES Order.

“NYSERDA” means the New York State Energy Research and Development Authority.

“Public Service Commission” means the New York State Public Service Commission.

“Renewable Energy Standard” or “RES” means the Renewable Energy Standard adopted by the State in the CES Order.

“RES Compliance Program” means a program or initiative that the Authority has adopted for the purpose of meeting the RES for the load that the Authority serves under the EP and RP power programs as authorized in the Power Authority Act.

“State Energy Plan” means the 2015 New York State Energy Plan as amended from time to time.

“Zero Emission Credit” or “ZEC” has the meaning provided in the CES Order.

“Zero Emission Credit Charge” or “ZEC Charge” means the charge to the Customer established in this Schedule D.

“ZEC Purchase Obligation” has the meaning provided in Section II.2 of this Schedule D.

“ZEC Program Year” has the meaning provided in Section II.2 of this Schedule D.

II. ZEC CHARGE

1. Notwithstanding any other provision of the Agreement, or any provision of Service Tariff No. WNY-2 or the Rules, as of January 1, 2019, the Customer shall be subject to a ZEC Charge as provided in this Schedule D. The ZEC Charge shall be in addition to all other charges, fees and assessments provided for in the Agreement, Service Tariff No. WNY-2 and the Rules. By accepting Electric Service under the Agreement, the Customer agrees to pay the ZEC Charge.
2. As provided in the CES Order, the Public Service Commission, as part of the CES and Tier 3 of the Renewable Energy Standard, imposed an obligation on Load Serving Entities that are subject to the CES Order (“Affected LSEs”) to purchase Zero Emission Credits from NYSERDA in an amount representing the Affected LSE’s proportional share of ZECs calculated on the basis of the amount of electric load the LSE serves in relation to the total electric load served by all Load Serving Entities in the New York Control area, to support the preservation of existing at risk nuclear zero emissions attributes in the State (the “ZEC Purchase Obligation”). The ZEC Purchase Obligation is implemented on the basis of program years running from April 1 through March 31 of each year (“ZEC Program Year”).
3. The ZEC Charge is part of a RES Compliance Program that the Authority has adopted for the purpose of supporting the CES and Tier 3 of the RES and implementing the EP and RP power programs in a manner that is consistent with the New York State Energy Plan. The Authority will comply with the CES and Tier 3 of the RES by applying a form of ZEC Purchase Obligation to the end-user load for which the Authority serves as a load serving entity, including the load that the Authority serves under the EP and RP power programs.
4. The ZEC Charge, which is intended to recover from the Customer costs that the Authority incurs for purchasing ZECs in quantities that are attributable to the Customer’s EP and/or RP load served under this Agreement, will be determined and assessed to the Customer as follows:
 - a. The cost of the total ZEC Purchase Obligation for all LSEs in the New York Control Area, including the Authority as a participating load serving entity, will be assessed pursuant to the methodology provided in the CES Order. The Authority will purchase its proportionate share of ZECs from NYSERDA based on the proportion of the forecasted total kilowatt-hours load served by

the Authority (i.e., total Authority LSE load) in relation to the forecasted total kilowatt-hours load served by all LSEs in the New York Control Area as provided in the CES Order. The ZEC Purchase Obligations may be based on initial load forecasts with reconciliations made at the end of each ZEC Program Year by NYSERDA.

- b. The Authority will allocate costs from its ZEC Purchase Obligation between its power programs/load for which it serves as load serving entity, including the EP and RP load that it serves (the “EP and RP Programs ZEC Costs”). Such allocation will be based on the forecasted kilowatt-hours load of the EP and RP programs to be served by the Authority in relation to the forecasted total kilowatt-hours load served by the Authority (total Authority LSE load) for each ZEC Program Year. In addition, any balance resulting from the ZEC Program Year-end reconciliation of ZEC Purchase Obligations will be allocated to the EP and RP power programs based on the proportion of the actual annual kilowatt-hours load served under such programs to total actual annual kilowatt-hours load served by the Authority (total Authority LSE load).
 - c. The Authority will allocate a portion of the EP and RP Programs ZEC Costs to the Customer as the ZEC Charge based on the proportion of the Customer’s actual kilowatt-hours load for the EP and/or RP purchased by the Customer to total kilowatt-hours load served by the Authority under the EP and RP power programs (i.e., EP and RP Programs level load). In addition, any balance resulting from the ZEC Program Year-end reconciliation of the ZEC Purchase Obligation referenced above will be passed through to the Customer based on the proportion of the Customer’s annual kilowatt-hours load purchased under this Agreement to total annual kilowatt-hours load served under the EP and RP power program by the Authority (EP and RP Programs level load). The ZEC Charge assessed to the Customer shall not include any costs resulting from the Authority’s inability to collect a ZEC Charge from any other Authority customer.
5. The Authority may, in its discretion, include the ZEC Charge as part of the monthly bills for Electric Service as provided for in the Agreement, or bill the Customer for the ZEC Charge pursuant to another Authority-established procedure.
6. The Authority may, in its discretion, modify the methodology used for determining the ZEC Charge and the procedures used to implement such ZEC Charge on a nondiscriminatory basis among affected EP and RP customers, upon consideration of such matters as Public Service Commission orders modifying or implementing the CES Order, guidance issued by the New York Department of Public Service, and other information that the Authority reasonably determines to be appropriate to the determination of such methodology. The Authority shall

provide Customer with reasonable notice of any modifications to the methodology or procedures used to determine and implement the ZEC Charge.

7. Nothing in this Schedule shall limit or otherwise affect the Authority's right to charge or collect from the Customer any rate, charge, fee, assessment, or tax provided for under any other provision of the Agreement, or any provision of Service Tariff No. WNY-2 or the Rules.
8. If the ZEC Purchase Obligation is modified or terminated by the Public Service Commission or other controlling governmental authority (collectively, "Government Action"), the Authority shall modify or terminate the ZEC Charge, and assess any additional charges or provide any credits to the Customer, to the extent that the Authority determines such actions to be appropriate based on such Government Action.

SCHEDULE E
MONTHLY RENEWABLE ENERGY CREDIT CHARGE

I. DEFINITIONS

When used with initial capitalization, whether singular or plural, the following terms, as used in this Schedule, shall have the meanings as set forth below. Capitalized terms not defined in this Schedule shall have the meaning ascribed to them elsewhere in the Agreement, in Service Tariff No. WNY-2, or in the Rules.

“Alternative REC Compliance Program” has the meaning provided in Section III.1 of this Schedule E.

“Annual REC Percentage Target” has the meaning provided in Section II.2 of this Schedule E.

“CES Order” means the Order issued by the Public Service Commission entitled “Order Adopting a Clean Energy Standard, issued on August 1, 2016, in Case Nos. 15-E-0302 and 16-E-0270, and includes all subsequent orders amending, clarifying and/or implementing such Order or the RES.

“Clean Energy Standard” or “CES” means the Clean Energy Standard adopted by the State in the CES Order.

“Load Serving Entity” has the meaning provided in the CES Order.

“Mandatory Minimum Percentage Proportion” has the meaning provided in the CES Order.

“Monthly Renewable Energy Credit Charge” or “Monthly REC Charge” means the monthly charge to the Customer established in this Schedule E.

“NYSERDA” means the New York State Energy Research and Development Authority.

“Public Service Commission” means the New York State Public Service Commission.

“Renewable Energy Credit” or “REC” refers to a qualifying renewable energy credit as described in the CES Order.

“State Energy Plan” means the 2015 New York State Energy Plan as amended from time to time.

“RES Compliance Program” means a program or initiative that the Authority has adopted for the purpose of meeting the RES for the load that the Authority serves under the EP and RP power programs as authorized in the Power Authority Act.

“Renewable Energy Standard” or “RES” means the Renewable Energy Standard adopted by the State in the CES Order.

“REC Compliance Measures” mean: (1) the Authority’s procurement of RECs from NYSERDA in accordance with NYSERDA procedures and/or the CES Order; (2) the Authority’s procurement of RECs from available REC markets; (3) the Authority’s procurement of RECs from sources other than those identified in items (1) and (2) of this definition, including through a procurement process adopted by the Authority; and/or (4) any other measure that the PCS authorizes a Load Serving Entity to implement for the purpose of meeting the applicable Mandatory Minimum Percentage Proportion.

“Total Monthly EP-RP Load” has the meaning provided in Section II.3.b of this Schedule E

“Total Monthly REC Costs” has the meaning provided in Section II.3.b of this Schedule E.

II. MONTHLY REC CHARGE

1. Notwithstanding any other provision of the Agreement, or any provision of Service Tariff No. WNY-2 or the Rules, as of January 1, 2019, the Customer shall be subject to a Monthly REC Charge as provided in this Schedule E. The Monthly REC Charge is in addition to all other charges, fees and assessments provided in the Agreement, Service Tariff No. WNY-2 and the Rules. By accepting Electric Service under the Agreement, the Customer agrees to pay the Monthly REC Charge.
2. The Monthly REC Charge is part of a RES Compliance Program that the Authority has adopted for the purpose of complying with the CES and Tier 1 of the RES and implementing the EP and RP power programs in a manner that is consistent with the New York State Energy Plan, pursuant to which the Authority will invest in new renewable generation resources to serve its EP and RP customers. Such investments will be made through the procurement of RECs through REC Compliance Measures in quantities that are intended to address the annual Mandatory Minimum Percentage Proportions as applied by the Authority to the total EP and RP load that the Authority will serve each calendar year (the “Annual REC Percentage Target”) for the purpose of ultimately meeting the RES.
3. The Monthly REC Charge, which is intended to recover from the Customer costs that the Authority incurs for implementing REC Compliance Measures that are attributable to the Customer’s EP and/or RP load served under this Agreement, will be determined and assessed to the Customer as follows:

- a. The Authority shall have the right, for each calendar year to implement such REC Compliance Measures as it determines in its discretion to be appropriate for the purpose of meeting the Annual REC Percentage Target for the total EP and RP load that it will serve during such calendar year.
 - b. The Authority will, for each month of each calendar year, calculate the total costs ("Total Monthly REC Costs") that the Authority has incurred or estimates that it will incur from implementing RES Compliance Measures for the purpose of meeting the Annual REC Percentage Target for the total EP and RP kilowatt-hour load for the month ("Total Monthly EP-RP Load"). The Total Monthly REC Costs may be calculated based on forecasts of the Total Monthly EP-RP Load that the Authority expects to serve for the month, or on a lagged basis based on the actual Total Monthly EP-RP Load that the Authority served for the month.
 - c. Each month, the Authority will assess to the Customer, as a Monthly REC Charge, which will represent the Customer's share of the Total Monthly REC Costs assessed to the Total Monthly EP-RP Load. The Monthly REC Charge will be assessed as the proportion of the Customer's total kilowatt-hours load served by the Authority for such month to the Total Monthly EP-RP Load served by the Authority for such month, provided, however, that:
 - i. the Monthly REC Charge to the Customer shall not include any costs associated with the Authority's inability to collect the Monthly REC Charge from other Authority customers; and
 - ii. the effective per-MWh rate of the Monthly REC Charge to the Customer averaged over the REC Program Year to which the Annual REC Percentage Target applies shall not exceed the per-MWh rate of a Monthly REC Charge based on NYSERDA's published REC price for the REC Program Year.
4. The Authority may, in its discretion, include the Monthly REC Charge as part of the monthly bills for Electric Service as provided for in the Agreement, or bill the Customer for the Monthly REC Charge pursuant to another Authority-established procedure.
5. The Authority will, at the conclusion of each calendar year in which it assesses a Monthly REC Charge, conduct a reconciliation process based on the actual costs that it incurred for REC Compliance Measures and actual load served for the year, compared with cost or load estimates or forecasts, if any, that the Authority used to calculate the Customer's Monthly REC Charges during the year. The Authority will issue a credit, or an adjusted final charge for the year, as appropriate, based on the results of such reconciliation process. Any such final charge shall be payable within the time frame applicable to the Authority's bills

for Electric Service under this Agreement or pursuant to any other procedure established by the Authority pursuant to Section II.4 of this Schedule E.

6. Notwithstanding the provisions of Section II.3 of this Schedule E, if Electric Service for the Allocation is commenced after the Authority has implemented REC Compliance Measures for the year in which such Electric Service is commenced, and as a result the Customer's load cannot be accounted for in such REC Compliance Measures, the Authority may in its discretion implement separate REC Compliance Measures in order to meet the Annual REC Percentage Target for Customer's load for the year, and bill the Customer for the costs associated with such separate REC Compliance Measures.
7. Nothing in this Schedule shall limit or otherwise affect the Authority's right to charge or collect from the Customer, any rate, charge, fee, assessment, or tax provided for under any other provision of the Agreement, or any provision of Service Tariff No. WNY-2 or the Rules.

III. ALTERNATIVE REC COMPLIANCE PROGRAM

1. Nothing in this Schedule E shall be construed as preventing the Parties from entering into other agreements for an alternative arrangement for the Authority to meet the Annual REC Percentage Target with respect to the Customer's Allocation, including but not limited to Customer self-supply of RECs, alternative REC compliance programs and cost allocation mechanisms, in lieu of the Monthly REC Charge provided in this Schedule E (collectively, "Alternative REC Compliance Program").
2. The Authority shall communicate at least biennially with the Customer concerning implementation of the RES Compliance Program and potential Alternative REC Compliance Programs, if any, that the Authority is offering or expects to offer.



POWER AUTHORITY OF THE STATE OF NEW YORK

30 SOUTH PEARL STREET

ALBANY, NY 12207

Schedule of Rates for Sale of Firm Power Service to
Expansion Power and Replacement Power Customers
Located in Western New York

Service Tariff No. WNY-2

Table of Contents

Schedule of Rates for Firm Power Service	Leaf No.
I. Applicability	3
II. Abbreviations and Terms.....	3
III. Monthly Rates and Charges.....	5
A. Expansion Power (EP) and Replacement Power (RP) Base Rates.....	5
B. EP and RP Rates no Lower than Rural/Domestic Rate	5
C. Monthly Base Rates Exclude Delivery Service Charges	5
D. Minimum Monthly Charge.....	5
E. Estimated Billing	6
F. Adjustments to Charges	7
G. Billing Period	7
H. Billing Demand	7
I. Billing Energy.....	7
J. Contract Demand	7
IV. General Provisions	8
A. Character of Service	8
B. Availability of Energy	8
C. Delivery	8
D. Adjustment of Rates	8
E. Billing Methodology and Billing	9
F. Payment by Customer to Authority.....	10
1. Demand and Energy Rates, Taxes	10
2. Transmission Charge	10
3. NYISO Transmission and Related Charges.....	10
4. Taxes Defined	11
5. Substitute Energy.....	11
6. Payment Information	11
7. Billing Disputes	11
G. Rendition and Payment of Bills.....	12
H. Adjustment of Charges – Distribution Losses.....	12
I. Conflicts.....	12
V. Annual Adjustment Factor	13

Schedule of Rates for Firm Power Service

I. Applicability

To sales of Expansion Power and/or Replacement Power directly to a qualified business Customer for firm power service.

II. Abbreviations and Terms

- kW kilowatt(s)
- kW-mo. kilowatt-month
- kWh kilowatt-hour(s)
- MWh megawatt-hour(s)
- NYISO New York Independent System Operator, Inc. or any successor organization
- PAL New York Public Authorities Law
- OATT Open Access Transmission Tariff issued by the NYISO

Agreement: An executed written agreement between the Authority and the Customer for the sale of Expansion Power and/or Replacement Power to the Customer.

Annual Adjustment Factor or **AAF**: This term shall have the meaning set forth in Section V herein.

Authority: The Power Authority of the State of New York, a corporate municipal instrumentality and a political subdivision of the State of New York created pursuant to Chapter 772 of the New York Laws of 1931 and existing and operating under Title 1 of Article 5 of the PAL, also known as the “New York Power Authority.”

Customer: A business entity that has received an allocation of Expansion Power and/or Replacement Power, and that purchases Expansion Power and/or Replacement Power, directly from the Authority.

Electric Service: The power and energy provided to the Customer in accordance with the Agreement, this Service Tariff and the Rules.

Expansion Power or **EP** and/or **Replacement Power** or **RP**: Firm Power and Firm Energy made available under this Service Tariff by the Authority from the Project for sale to the Customer for business purposes pursuant to PAL § 1005(5) and (13).

Firm Power: Capacity (kW) that is intended to be always available from the Project subject to the curtailment provisions set forth in the Agreement between the Authority and the Customer and this Service Tariff. Firm Power shall not include peaking power.

Firm Energy: Energy (kWh) associated with Firm Power.

Load Serving Entity or **LSE**: This term shall have the meaning set forth in the Agreement.

Load Split Methodology or **LSM**: A type of billing methodology applicable to a Customer's Allocation which determines how a Customer's total metered usage is apportioned between the power and energy supplied by the Allocation and the Customer's other source of electricity supply, if any. LSM is usually provided for in an agreement between the Authority and the Customer's local electric utility, an agreement between the Authority and the Customer, or an agreement between the Authority, the Customer and the Customer's local electric utility. The load split methodology is often designated as "Load Factor Sharing" or "LFS", "First through the Meter" or "FTM", "First through the Meter Modified" or "FTM Modified", or "Replacement Power 2" or "RP 2".

Project: The Authority's Niagara Power Project, FERC Project No. 2216.

Rate Year or **RY**: The period from July 1 through June 30. For example, RY 2018 refers to July 1, 2018 through June 30, 2019.

Rules: The Authority's rules and regulations set forth in 21 NYCRR § 450 *et seq.*, as they may be amended from time to time.

Service Tariff: This Service Tariff No. WNY-2.

All other capitalized terms and abbreviations used in this Service Tariff but not defined in this Section or other provisions of this Service Tariff shall have the same meaning as set forth in the Agreement.

III. Monthly Rates and Charges

A. Expansion Power (EP) and Replacement Power (RP) Base Rates

The rates to be charged to the Customer by the Authority shall be as follows:

Billing Period	Demand (\$/kW)	Energy (\$/MWh)
January – June 2019	7.60	13.00

1. For RY 2019 (July 2019 through June 2020 Billing Periods), 50% of the Annual Adjustment Factor ("AAF"), as described in Section V, will be applied to the demand and energy rates stated in the table above.
2. For RY 2020 (July 2020 through June 2021 Billing Periods) and each Rate Year thereafter, the AAF will be applied to the then-effective base rates for demand and energy in accordance with Section V.

B. EP and RP Rates no Lower than Rural/Domestic Rate

At all times the applicable base rates for demand and energy determined in accordance with Sections III.A and V of this Service Tariff shall be no lower than the rates charged by the Authority for the sale of hydroelectricity for the benefit of rural and domestic customers receiving service in accordance with the Niagara Redevelopment Act, 16 U.S.C. § 836(b)(1) (the "Rural/Domestic Rate"). This provision shall be implemented as follows: if the base rates, as determined in accordance with Sections III.A and V of this Service Tariff, are lower than the Rural/Domestic Rate on an average \$/MWh basis, each set of rates measured at 80% load factor which is generally regarded as representative for EP and RP Customers, then the base rates determined under Sections III.A and V of this Service Tariff will be revised to make them equal to the Rural/Domestic Rate on an average \$/MWh basis. However, the base rates as so revised will have no effect until such time as these base rates are lower than the Rural/Domestic Rate.

C. Monthly Base Rates Exclude Delivery Service Charges

The monthly base rates set forth in this Section III exclude any applicable costs for delivery services provided by the local electric utility.

D. Minimum Monthly Charge

The Minimum Monthly Charge shall equal the product of the demand charge and the Contract Demand (as defined herein). Such Minimum Monthly Charge shall be in addition to any NYISO Charges or Taxes (each as defined herein) incurred by the Authority with respect to the Customer's Allocation.

E. Estimated Billing

If the Authority, in its discretion, determines that it lacks reliable data on the Customer's actual demand and/or energy usage for a Billing Period during which the Customer receives Electric Service from the Authority, the Authority shall have the right to render a bill to the Customer for such Billing Period based on estimated demand and estimated usage ("Estimated Bill").

For the purpose of calculating a Billing Demand charge for an Estimated Bill, the demand charge will be calculated based on the Load Split Methodology that is applicable to the Customer as follows:

- For Customers whose Allocation is subject to a Load Factor Sharing/LFS LSM, the estimated demand (kW) will be calculated based on an average of the Customer's Billing Demand (kW) values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated demand (kW) value for the Estimated Bill will equal the Customer's takedown (kW) amount.
- For Customers whose Allocation is subject to a First through the Meter/ FTM, FTM Modified, or RP 2 LSM, the estimated demand (kW) value will equal the Customer's takedown (kW) amount.

For the purpose of calculating a Billing Energy charge for an Estimated Bill, the energy charge will be calculated based on the Customer's Load Split Methodology as follows:

- For Customers whose Allocation is subject to a Load Factor Sharing/LFS LSM, the estimated energy (kWh) will be based on the average of the Customer's Billing Energy (kWh) values for the previous three (3) consecutive Billing Periods. If such historical data is not available, then the estimated energy value (kWh) will be equal to the takedown (kW) amount at 70 percent load factor for that Billing Period.
- For Customers whose Allocation is subject to a First through the Meter/FTM, FTM Modified, or RP 2 LSM, the estimated energy (kWh) will be equal to the takedown (kW) amount at 100 percent load factor for that Billing Period.

If data indicating the Customer's actual demand and usage for any Billing Period in which an Estimated Bill was rendered is subsequently provided to the Authority, the Authority will make necessary adjustments to the corresponding Estimated Bill and, as appropriate, render a revised bill (or provide a credit) to the Customer.

The Minimum Monthly Charge provisions of Section III.D shall apply to Estimated Bills.

The Authority's discretion to render Estimated Bills is not intended and shall not be construed to limit the Authority's rights under the Agreement.

F. Adjustments to Charges

In addition to any other adjustments provided for in this Service Tariff, in any Billing Period, the Authority may make appropriate adjustments to billings and charges to address such matters as billing and payment errors, and the receipt of actual, additional, or corrected data concerning Customer energy or demand usage.

G. Billing Period

The Billing Period is any period of approximately thirty (30) days, generally ending with the last day of each calendar month but subject to the billing cycle requirements of the local electric utility in whose service territory the Customer's facilities are located.

H. Billing Demand

Billing Demand shall be determined by applying the applicable billing methodology to total meter readings during the Billing Period. See Section IV.E, below.

I. Billing Energy

Billing Energy shall be determined by applying the applicable billing methodology to total meter readings during the Billing Period. See Section IV.E, below.

J. Contract Demand

The Contract Demand will be the amount of Expansion Power and/or Replacement Power, not to exceed the Allocation, provided by the Authority to the Customer in accordance with the Agreement

IV. General Provisions

A. Character of Service

Alternating current; sixty cycles, three-phase.

B. Availability of Energy

1. Subject to Section IV.B.2, the Authority shall provide to the Customer in any Billing Period Firm Energy associated with Firm Power. The offer of Firm Energy for delivery shall fulfill the Authority's obligations for purposes of this provision whether or not the Firm Energy is taken by the Customer.
2. In the event of an Adverse Water Condition, the rights and obligations of the Customer and Authority, including but not limited to such matters as Substitute Energy, Customer-Arranged Energy and responsibility for payment of costs associated therewith, will be governed by Article IX of the Agreement.

C. Delivery

For the purpose of this Service Tariff, Firm Power and Firm Energy shall be deemed to be offered when the Authority is able to supply Firm Power and Firm Energy to the Authority's designated NYISO load bus. If, despite such offer, there is a failure of delivery caused by the Customer, NYISO or local electric utility, such failure shall not be subject to a billing adjustment pursuant to Section 454.6(d) of the Rules.

D. Adjustment of Rates

To the extent not inconsistent with the Agreement, the base rates contained in this Service Tariff may be revised from time to time on not less than thirty (30) days written notice to the Customer.

E. Billing Methodology

Unless otherwise specified in the Agreement, the following provisions shall apply:

1. The billing methodology used to determine the amount of Firm Power and Firm Energy to be billed to the Customer related to its Allocation shall be Load Factor Sharing (“LFS”) in a manner consistent with the Agreement and any applicable delivery agreement between the Authority and the Customer’s local electric utility or both as determined by the Authority. An alternative billing methodology may be used provided the Customer and the Authority agree in writing and the Customer’s local electric utility provides its consent if the Authority determines that such consent is necessary.
2. **Billing Demand** –The Billing Demand charged by the Authority to each Customer will be the highest 15 or 30-minute integrated demand, as determined by the Customer’s local electric utility, during each Billing Period recorded on the Customer’s meter multiplied by a percentage based on the LFS methodology, unless the Customer and the Authority agree in writing to an alternative billing methodology and the Customer’s local electric utility provides its consent if the Authority determines that such consent is necessary. Billing Demand may not exceed the amount of the Contract Demand.
3. **Billing Energy** –The kilowatt-hours charged by the Authority to each Customer will be the total number of kilowatt-hours recorded on the Customer’s meter for the Billing Period multiplied by a percentage based on the LFS methodology, unless the Customer and the Authority agree in writing to an alternative billing methodology and the Customer’s local electric utility provides its consent if the Authority determines that such consent is necessary.
4. With regard to LFS methodology calculations:
 - a. For every hour of the Billing Period, the Customer receives hydropower energy (Firm Energy) equal to the hourly metered load multiplied by the ratio of Customer’s Contract Demand divided by the maximum hourly metered load value recorded in a given Billing Period, such ratio not to exceed the value of 1.
 - b. When the maximum hourly metered demand for the Billing Period is less than or equal to the Contract Demand, all of the Customer’s metered load will be supplied by Firm Energy.
 - c. When the maximum hourly metered demand for the Billing Period is greater than the Contract Demand, the portion of the Customer’s metered load to be supplied by Firm Energy is as follows:
 - i. For Customer with hourly billing: the sum of the values, for each hour of the Billing Period, of the Contract Demand divided by the maximum hourly metered demand in the Billing Period multiplied by the hourly metered energy consumption.
 - ii. For Customer with monthly billing: the Contract Demand divided by the maximum hourly metered demand in the Billing Period multiplied by the total metered energy consumption during the Billing Period.
 - d. All demand values will be adjusted for losses.

F. Payment by Customer to Authority

1. Demand and Energy Charges, Taxes

The Customer shall pay the Authority for Firm Power and Firm Energy during any Billing Period the higher of either (i) the sum of (a), (b) and (c) below, or (ii) the Minimum Monthly Charge (as defined herein):

- a. The demand charge per kilowatt for Firm Power specified in this Service Tariff or any modification thereof applied to the Customer's Billing Demand (as defined in Section IV.E, above) for the Billing Period; and
- b. The energy charge per MWh for Firm Energy specified in this Service Tariff or any modification thereof applied to the Customer's Billing Energy (as defined in Section IV.E, above) for the Billing Period; and
- c. A charge representing reimbursement to the Authority for all applicable Taxes incurred by the Authority as a result of providing Expansion Power and/or Replacement Power allocated to the Customer.

2. Transmission Charge

The Customer shall compensate the Authority for all transmission costs incurred by the Authority with respect to the Allocation, including such costs that are charged pursuant to the OATT.

3. NYISO Transmission and Related Charges

The Customer shall compensate the Authority for the following NYISO transmission and related charges (collectively, "NYISO Charges") assessed on the Authority for services provided by the NYISO pursuant to its OATT or other tariffs (as the provisions of those tariffs may be amended and in effect from time to time) associated with providing Electric Service to the Customer:

- A. Ancillary Services 1 through 6 and any new ancillary services as may be defined and included in the OATT from time to time;
- B. Marginal losses;
- C. The New York Power Authority Transmission Adjustment Charge ("NTAC");
- D. Congestion costs inclusive of any rents collected or owed due to any associated grandfathered transmission congestion contracts as provided in Attachment K of the OATT;
- E. Any and all other charges, assessments, or other amounts associated with deliveries to Customers or otherwise associated with the Authority's responsibilities as a Load Serving

Entity for the Customers that are assessed on the Authority by the NYISO under the provisions of its OATT or under other applicable tariffs; and

- F. Any charges assessed on the Authority with respect to the provision of Electric Service to Customers for facilities needed to maintain reliability and incurred in connection with the NYISO's Comprehensive System Planning Process (or similar reliability-related obligations incurred by the Authority with respect to Electric Service to the Customer), applicable tariffs, or required to be paid by the Authority in accordance with law, regardless of whether such charges are assessed by the NYISO or another party.

The NYISO Charges, if any, incurred by the Authority on behalf of the Customer, are in addition to the Authority production charges that are charged to the Customer in accordance with other provisions of this Service Tariff.

The method of billing NYISO charges to the Customer will be based on Authority's discretion.

4. Taxes Defined

Taxes shall be any adjustment as the Authority deems necessary to recover from the Customer any taxes, assessments or any other charges mandated by federal, state or local agencies or authorities that are levied on the Authority or that the Authority is required to collect from the Customer if and to the extent such taxes, assessments or charges are not recovered by the Authority pursuant to another provision of this Service Tariff.

5. Substitute Energy

The Customer shall pay for Substitute Energy, if applicable, as specified in the Agreement.

6. Payment Information

Bills computed under this Service Tariff are due and payable by electronic wire transfer in accordance with the Rules. Such wire transfer shall be made to J P Morgan Chase NY, NY / ABA021000021 / NYPA A/C # 008-030383, unless otherwise indicated in writing by the Authority. The Authority may in its discretion change the foregoing account and routing information upon notice to the Customer.

7. Billing Disputes

In the event that there is a dispute on any items of a bill rendered by the Authority, the Customer shall pay such bill in full. If necessary, any adjustments will be made thereafter.

G. Rendition and Payment of Bills

1. The Authority will render bills to the Customer for Electric Service on or before the tenth (10th) business day of the month for charges due for the previous Billing Period. Such bills shall include charges for Electric Service, NYISO Charges associated with the Allocation (subject to adjustment consistent with any later NYISO re-billings to the Authority), and all other applicable charges, and are subject to adjustment as provided for in the Agreement, the Service Tariff and the Rules.
2. The Authority will charge and collect from the Customer all Taxes (including local, state and federal taxes) the Authority determines are applicable, unless the Customer furnishes the Authority with proof satisfactory to the Authority that (i) the Customer is exempt from the payment of any such Taxes, and/or (ii) the Authority is not obligated to collect such Taxes from the Customer. If the Authority is not collecting Taxes from the Customer based on the circumstances described in (i) or (ii) above, the Customer shall immediately inform the Authority of any change in circumstances relating to its tax status that would require the Authority to charge and collect such Taxes from the Customer.
3. Unless otherwise agreed to by the Authority and the Customer in writing, the Authority will render bills to the Customer electronically.
4. Payment of bills by the Customer shall be due and payable by the Customer within twenty (20) days of the date the Authority renders the bill.
5. Except as otherwise agreed by the Authority in writing, if the Customer fails to pay any bill when due an interest charge of two percent of the amount unpaid will be added thereto as liquidated damages, and thereafter, as further liquidated damages, an additional interest charge of one and one-half percent of the sum unpaid shall be added on the first day of each succeeding Billing Period until the amount due, including interest, is paid in full.
6. If at any time after commencement of Electric Service the Customer fails to make complete payment of any two (2) bills for Electric Service when such bills become due pursuant to Agreement, the Authority shall have the right to require that the Customer deposit with the Authority a sum of money in an amount equal to all charges that would be due under this Agreement for Electric Service for two (2) consecutive calendar months as estimated by the Authority. Such deposit will be deemed security for the payment of unpaid bills and/or other claims of the Authority against the Customer upon termination of Electric Service. The failure or refusal of the Customer to provide the deposit within thirty (30) days of a request for such deposit will be grounds for the Authority in its discretion to suspend Electric Service to the Customer or terminate the Agreement.

Unless otherwise agreed to by the Authority and the Customer in writing, in the event the Customer disputes any item of any bill rendered by Authority, the Customer shall pay such bill in full within the time provided for by this Agreement, and adjustments, if appropriate, will be made thereafter.

H. Adjustment of Charges – Distribution Losses

The Authority will make appropriate adjustments to compensate for distribution losses of the local electric utility.

I. Conflicts

In the event of any inconsistencies, conflicts, or differences between the provisions of this Service Tariff and the Rules, the provisions of this Service Tariff shall govern. In the event of any inconsistencies, conflicts or differences between the provisions of the Agreement and this Service Tariff or the Rules, the provisions of the Agreement shall govern.

V. Annual Adjustment Factor

A. Adjustment of Rates

1. The AAF will be based upon a weighted average of three indices described below. For each new Rate Year, the index value for the latest available calendar year ("Index Value for the Measuring Year") will be compared to the index value for the calendar year immediately preceding the latest available calendar year (the Index Value for the Measuring Year -1"). The change for each index will then be multiplied by the indicated weights. As described in detail below, these products are then summed, producing the AAF. The AAF will be multiplied by the base rate for the current Rate Year to produce the base rates for the new Rate Year, subject to a maximum adjustment of $\pm 5.0\%$ (" $\pm 5\%$ Collar"). Amounts outside the $\pm 5\%$ Collar shall be referred to as the "Excess."

Index 1, "BLS Industrial Power Price" (35% weight): The average of the monthly Producer Price Index for Industrial Electric Power, commodity code number 0543, not seasonally adjusted, as reported by the U.S. Department of Labor, Bureau of Labor Statistics ("BLS") electronically on its internet site and consistent with its printed publication, "Producer Price Index Detailed Report". For Index 1, the Index Value for the Measuring Year will be the index for the calendar year immediately preceding July 1 of the new Rate Year.

Index 2, "EIA Average Industrial Power Price" (40% weight): The average weighted annual price (as measured in cents/kWh) for electric sales to the industrial sector in the ten states of CT, MA, ME, NH, NJ, NY, OH, PA, RI and VT ("Selected States") as reported by Coal and Electric Data and Renewables Division; Office of Coal, Nuclear, Electric and Alternate Fuels; Energy Information Administration ("EIA"); U.S. Department of Energy Form EIA-861 Final Data File. For Index 2, the Index Value for the Measuring Year will be the index for the calendar year two years preceding July 1 of the new Rate Year.

Index 3, "BLS Industrial Commodities Price Less Fuel" (25% weight): The monthly average of the Producer Price Index for Industrial Commodities less fuel, commodity code number 03T15M05, not seasonally adjusted, as reported by the U.S. Department of Labor, BLS electronically on its internet site and consistent with its printed publication, "Producer Price Index Detailed Report". For Index 3, the Index Value for the Measuring Year will be the index for the calendar year immediately preceding July 1 of the new Rate Year.

2. Annual Adjustment Factor Computation Guide

- Step 1: For each of the three Indices, divide the Index Value for Measuring Year by the Index Value for the Measuring Year-1.
- Step 2: Multiply the ratios determined in Step 1 by percentage weights for each Index. Sum the results to determine the weighted average. This is the AAF.
- Step 3: Commencing RY 2014, modifications to the AAF will be subject to $\pm 5\%$ Collar, as described below.
- a) When the AAF falls outside the $\pm 5\%$ Collar, the Excess will be carried over to the subsequent RY. If the AAF in the subsequent RY is within the $\pm 5\%$ Collar, the current RY Excess will be added to/subtracted from the subsequent Rate Year's AAF, up to the $\pm 5\%$ Collar.

- b) Excesses will continue to accrue without limit and carry over such that they will be added to/subtracted from the AAF in any year where the AAF is within the $\pm 5\%$ Collar.

Step 4: Multiply the current Rate Year base rate by the AAF calculated in Step 2 to determine the new Rate Year base rate.

The foregoing calculation shall be performed by the Authority consistent with the sample presented in Section V.B below.

3. Subject to the provisions of Section III.A of this Service Tariff, the Authority shall provide the Customer with notice of any adjustment to the current base rate per the above and with all data and calculations necessary to compute such adjustment by June 15th of each year to be effective on July 1 of such year, commencing in 2014. The values of the latest officially published (electronically or otherwise) versions of the indices and data provided by the BLS and EIA as of June 1 shall be used notwithstanding any subsequent revisions to the indices.
4. If during the term of the Agreement any of the three above indices ceases to be available or ceases to be reflective of the relevant factors or of changes which the indices were intended to reflect, the Customer and the Authority may mutually select a substitute Index. The Customer and the Authority agree to mutually select substitute indices within 90 days, once one of them is notified by the other that the indices are no longer available or no longer reflect the relevant factors or changes which the indices were intended to reflect. Should the 90-day period cover a planned July 1 rate change, the current base rates will remain in effect until substitute indices are selected and the adjusted rates based on the substitute indices will be retroactive to the previous July 1. If the Customer and Authority are unable to reach agreement on substitute indices within the 90-day period, the Customer and the Authority agree to substitute the mathematic average of the PPI—Intermediate Materials, Supplies and Components (BLS Series ID WPUSOP2000) and the PPI-- Finished Goods (BLS Series ID WPUSOP3000) indices for one or more indices that have ceased to be available or reflective of their intended purpose and shall assume the percentage weighting(s) of the one or more discontinued indices as indicated in Section V.A.1.

B. Sample Computation of the AAF (hypothetical values for July 1, 2014 implementation):

STEP 1

Determine the Index Value for the Measuring Year (MY) and Measuring Year - 1 (MY-1) for Each Index

- Index 1 - Producer Price Index, Industrial Power

	Measuring Year <u>(2013)</u>	Measuring Year - 1 <u>(2012)</u>
January	171.2	167.8
February	172.8	167.6
March	171.6	168.2
April	173.8	168.6
May	175.1	171.6
June	185.7	180.1
July	186.4	182.7
August	184.7	179.2
September	185.5	181.8
October	175.5	170.2
November	172.2	168.8
December	171.8	166.6
Average	177.2	172.8
Ratio of MY/MY-1		1.03

- Index 2 – EIA Industrial Rate

<u>State</u>	<u>Revenues</u> (\$000s)	<u>Sales</u> (MWh)	<u>Avg. Rate</u> (cents/kWh)
<u>Measuring Year (2012)</u>			
CT	590,972	6,814,757	
MA	1,109,723	13,053,806	
ME	328,594	4,896,176	
NH	304,363	2,874,495	
NJ	1,412,665	15,687,873	
NY	2,001,588	26,379,314	
OH	3,695,978	78,496,166	
PA	3,682,192	63,413,968	
RI	152,533	1,652,593	
VT	<u>155,903</u>	<u>2,173,679</u>	
TOTAL	13,434,511	215,442,827	6.24

Measuring Year -1 (2011)

CT	579,153	6,678,462	
MA	1,076,431	12,662,192	
ME	310,521	4,626,886	
NH	298,276	2,817,005	
NJ	1,370,285	15,217,237	
NY	1,891,501	24,928,452	
OH	3,622,058	76,926,243	
PA	3,571,726	61,511,549	
RI	144,144	1,561,700	
VT	<u>152,785</u>	<u>2,130,205</u>	
TOTAL	13,016,880	209,059,931	6.23

Ratio of MY/MY-1 **1.00**

- Index 3 – Producer Price Index, Industrial Commodities Less Fuel

	Measuring Year (2013)	Measuring Year -1 (2012)
January	190.1	187.2
February	190.9	188.0
March	191.6	188.7
April	192.8	189.9
May	194.7	191.8
June	195.2	192.3
July	195.5	192.3
August	196.0	193.1
September	196.1	193.2
October	196.2	193.8
November	196.6	193.7
December	196.7	194.0
Average	194.4	191.5
Ratio of MY/MY-1		1.02

STEP 2

Determine AAF by Summing the Weighted Indices

<u>Index</u>	<u>Ratio of MY to MY-1</u>	<u>Weight</u>	<u>Weighted Factors</u>
PPI Industrial Power	1.03	0.35	0.361
EIA Industrial Rate	1.00	0.40	0.400
PPI Industrial Commodities less fuel	1.02	0.25	<u>0.255</u>
AAF			1.016

STEP 3

Apply Collar of $\pm 5.0\%$ to Determine the Maximum/Minimum AAF.

$-5.0\% < 1.6\% < 5.0\%$; collar does not apply, assuming no cumulative excess.

STEP 4

Apply AAF to Calculate the New Rate Year Base Rate

	<u>Demand</u> \$/kW-mo.	<u>Energy</u> \$/MWh
Current Rate Year Base Rate	7.56	12.91
New Rate Year Base Rate	7.68	13.12

Applicants Recommended for an Award of Fund Benefits by the NNY Proceeds Allocation Board

Line	Business	City	County	Economic Development Region	Project Description	Project Type	Recommended Award Amount	Total Project Cost	Jobs Retained	Jobs Created
1	Kingston Pharma LLC	Massena	SLC	North Country	Expand manufacturing facility	Business Investment	\$200,000	\$2,200,000	12	45
Total:							\$200,000	\$2,200,000	12	45

Total Jobs Created & Retained: 57



Northern NY Power Proceeds Allocation Board

“EXHIBIT 5d i-1d-B”

Criteria adapted from the “Board Procedures, and Board Policies Relating to the Review of Applications for Fund Benefits”, adopted by the Northern New York Power Proceeds Allocation Board

1. The extent to which an award of Fund Benefits would be consistent with the strategies and priorities of the North Country Regional Economic Development Council (“NCREDC”). Such strategies and priorities include the following:
 - Energize our communities by building on growth in the aerospace, transit equipment, defense, biotech, energy, and manufacturing industries
 - Leverage our gateway to Canada, the nation’s largest trading partner, to lead the State in global investment
 - Attract and nurture entrepreneurs through innovation to catalyze the highest per capita rate of small business start-ups and expansions in the state
 - Invest in community development infrastructure that expands opportunities and capacity
 - Innovate effective rural healthcare and education delivery networks
 - Elevate global recognition of the region as one of the special places on the planet to visit, live, work and study
 - Activate tourism as a driver to diversify our economies by creating demand to accelerate private investment
 - Invest in agriculture as we help feed the region and the world
 - Create the greenest energy economy in the state
2. Whether the eligible project would occur in the absence of an award of Fund Benefits.
3. The extent to which an award of Fund Benefits will result in new capital investment in the State by the eligible applicant and the extent of such investment.
4. Other assistance the eligible applicant may receive to support the eligible project.
5. The type and cost of buildings, equipment and facilities to be constructed, enlarged or installed if the eligible applicant were to receive an award of Fund Benefits.
6. The eligible applicant's payroll, salaries, benefits and number of jobs at the eligible project for which an award of Fund Benefits is requested.
7. Where applicable, the number of jobs that will be created or retained within St. Lawrence County and any other parts of the State in relation to the requested award of Fund Benefits, and the extent to which the eligible applicant will agree to commit to creating or retaining such jobs as a condition to receiving an award of Fund Benefits.
8. Whether the eligible applicant is at risk of closing or curtailing facilities or operations in St. Lawrence County and other parts of the State, relocating facilities or operations out of St. Lawrence County and other parts of the State, or losing a significant number of



Northern NY Power Proceeds Allocation Board

“EXHIBIT 5d i-1d-B”

jobs in St. Lawrence County and other parts of the State, in the absence of an award of Fund Benefits.¹

9. The significance of the eligible project that would receive an award of Fund Benefits to the economy of the area in which such eligible project is located.
10. For new, expanded and/or rehabilitated facilities, the extent to which the eligible applicant will commit to implement or otherwise make tangible investments in energy efficiency measures as a condition to receiving an award of Fund Benefits.²

¹ Job creation and retention are key indicators of economic activity. However, the Allocation Board recognizes that certain investments may increase productivity and revitalize areas without immediately increasing permanent employment. Therefore, job creation/retention commitments will be emphasized primarily in the Business Investment Track. While job creation and retention may not be a significant factor for other Tracks, demonstration of economic development benefits to the Region will generally be considered favorably when assessing applications under all Tracks.

² As provided for in Economic development Law § 197-c(4), many of the criteria are adapted from criteria used in determining eligibility for Expansion Power, Replacement Power and Preservation Power under Public Authorities Law (“PAL”) § 1005(13). Certain criteria identified in PAL § 1005(13) are relevant to power allocations under these programs and do not have any logical application to the allocation of Fund Benefits. Therefore, the Board does not expect to use these criteria to evaluate applications for Fund Benefits.

EXHIBIT 5d i-1d-C



Northern NY Power Proceeds Allocation Board

Northern New York Economic Development Fund Recommendation Memo

EXHIBIT A

Applicant Name:	Kingston Pharma LLC ("Kingston")	REDC Region:	North Country
Project Type:	Business Investment	County:	St. Lawrence
Industry:	OTC Generic brand pharmaceutical mfr.	Locality:	Massena
Amount Requested:	\$200,000	Start Date:	10/1/18
		Finish Date:	12/31/18
RECOMMENDED OFFER			
Recommended Total Award:	\$200,000		
Total Project Cost:	\$2,200,000		
% of Project Cost Recommended:	9%		
PROJECT BUDGET (Proposed by Applicant)			
Use of funds	Amount	Source of Funds	Amount
Building Expansion	\$1,200,000	NNY EDF	\$200,000
Existing Building Purchase	\$900,000	Bank Loan	\$900,000
Packaging Machinery & Equipment	\$50,000	ESD/JDA Loan	\$880,000
Soft Costs Contingency	\$50,000	Company Equity	\$220,000
Total:	\$2,200,000	Total:	\$2,200,000
REGIONAL IMPACT MEASUREMENTS			
Job Commitments:	Applicant would retain 12 and create 45 full time positions at the project location over three years.		
Average Salary of Jobs:	\$30,000		
Indirect Jobs Created	n/a		
Other Impact			
PROJECT DESCRIPTION (Adapted from Application)			
<p>The site of the proposed project is a 33,000 square foot manufacturing plant which is a Current Good Manufacturing Practices class facility with a controlled temperature warehouse and offices. It was previously operated by Purine Pharma, which specialized in manufacturing liquid nasal, allergy, and cough and cold products for retail clients in the U.S. and abroad. In 2015, Geritrex LLC acquired Purine. Although it initially intended to expand the plant, Geritrex announced plans in 2016 to close the plant. Kingston took over the assets and manufacturing operations at the plant in 2016, where it now develops, manufactures, packages and markets store brand and private label consumer healthcare products (over the counter generic brands) that are comparable in safety, quality and effectiveness, and meet the same U.S. FDA and international requirements, as national brand alternatives. Primary customers currently include CVS, Walgreens, Healthlife of USA LLC, Sam's Club, Dollar General, Dollar Tree, and Puralife LLC (an exporter).</p>			



Northern NY Power Proceeds Allocation Board

Northern New York Economic Development Fund Recommendation Memo

EXHIBIT A

Kingston is now proposing to purchase its existing leased facility and add a 10,000 square foot expansion to add packaging machinery and equipment and warehousing space that will allow it to increase production capabilities, improve work process flow, reduce manufacturing costs and better meet demand.

OTHER ECONOMIC DEVELOPMENT BENEFITS RECEIVED

SLCIDA PILOT	\$165,665	Sales Tax Exemption	\$50,000
--------------	-----------	---------------------	----------

PREVIOUS STATE ASSISTANCE OFFERED OR PROVIDED

TYPE	AMOUNT	STATUS
N/A	\$	

BASIS FOR RECOMMENDATION

Kingston has considered relocating 12 employees to New Jersey to execute this project. An award would retain those positions and support the creation of 45 new full time positions in St. Lawrence County. As Kingston currently exports its products to six (6) countries in the Middle East, one in Eastern Europe, one in SE Asia and one in Caribbean, the project would help support export activity, which would bring additional economic value to the region. The company is only about two years old and has found it difficult to secure funds from traditional lending sources to support its expansion project. The project aligns well with NCREDC strategies and priorities to develop a life science-related cluster in the North Country.

ANTICIPATED DISBURSEMENT TERMS

Fund Benefits would be used to reimburse the applicant for a portion of costs associated with the building expansion. It is anticipated that funds will be disbursed in arrears upon project completion. Payment will be made upon presentation to NYPA of invoices and such other documentation acceptable to NYPA verifying the applicant has incurred eligible expenses of approximately \$2,200,000.

Moonshot Update

Doug McMahon, VP Strategy

October 2, 2018

Reminder of our three moonshot areas:

1 EV Acceleration



Accelerate NYS' progress towards REV GHG emissions reduction of 40% from 1990 levels by 2030, through electrifying the transportation sector

2 Clean Generation



Help ensure that Governor Cuomo's 2.4GW offshore wind target and more broadly, the REV 50% renewables generation by 2030 target are met affordably and efficiently

3 Flexibility for a Carbon Free Future



Create a future grid with carbon-free flexibility that enables high penetration of affordable and reliable renewables by 2030

Each are impactful investments that will help the State reach its 2030 clean energy goals

Strong progress continues to be made as we focus on rolling out the first set of DC Fast Chargers.



DCFC rollout
(Target 4 chargers per site)

Progress

- Comprehensive analysis for initial tranche of corridor and urban complete
- Scouting in-progress

2018 year end targets

3 sites in design/build (12 chargers)



Airport charging hubs

- Exploring options for site location and scope

Airport Hub

In design/build (10 chargers)



Partnerships

- Partnership RFI – 40+ responses received
- RFP award – turn-key design/build vendors

Partners

To leverage NYPA investment



DEC VW Settlement

- Plan released, NYPA to significantly support implementation

CIC's: Electric buses, L2 and DCFC

Building a strong partner ecosystem to help address the barriers to EV adoption remains a critical objective of the EVolve NY program.

1

Partnership RFI

2

EV Supply Equipment RFP

Objectives

- Identify potential public/private partnerships to address key barriers in the EV marketplace including financing and new business models
- Secure additional design/build contractors for electric vehicle supply equipment to expedite EVolve NY, Thruway, DEC, and NYC efforts

Status

- 46 responses received
- Focus on attracting private capital or innovative services including:
 - Innovative business models
 - Partnership opportunities to accelerate EV adoption
 - Consumer education tools to increase awareness, familiarity & consideration
- Six month evaluation process
- Recommend 5 year contract award, for \$60 million in aggregate, to six vendors
- Individual projects will be competitively bid among these firms

Contract Award: EV Supply Equipment

Requested Trustee Action:

Authorize award of 5-year contracts, in an amount, in aggregate, of \$60 million, to the following firms:

- Apex Solar Power of Queensbury, NY
- EV Connect, Inc. of Los Angeles, CA
- Efacec USA, Inc. of Norcross, GA
- EVgo Services LLC of Los Angeles, CA
- Verdek LLC of Madison, CT
- Zeco Systems, Inc. (dba Greenlots) of Los Angeles, CA

European Offshore Wind Study – update

Overview:

- MOU signed with Con Edison, New York Independent System Operator, Long Island Power Authority and New York State Research and Development Authority
- McKinsey has been selected to carry out the four week study
- Scope: to analyze the evolution of OSW transmission and interconnection design in Europe and how challenges were addressed:
 - Regulatory approaches
 - Ownership structures
 - Business and financing models
- Purpose: to learn from progress in Europe in order to apply relevant learnings to development of OSW in NY State beyond the first 800MW solicitation – focus on system efficiency

Timeline:

- Technical Conference, September 25, 2018
- Final Report expected end of October 2018

Flexibility will play an essential role in achieving the State's energy goals and REV – particularly if we are to maintain affordable energy for all New Yorkers.

State targets

50%
renewables
by 2030

Generation mix will be 30+%
intermittent solar and wind

40% GHG
reduction by
2030

38% of 2014 emissions come
from electric power generation

Significantly
improved
system
efficiency

Current system efficiency ~55%;
NYS customers pay \$238M+/yr
on peaker plants¹ that run <10%
of the time

Flexibility is a critical enabler of achieving these targets

Shift demand to match when
renewables are being generated;
and store clean electrons for
when they are needed

Replace retiring emissions-
producing peaker plants with
non-wires carbon-free
alternatives

Better matching of supply-
demand reduces reserve
capacity needed in the grid,
reducing total cost of electricity
for all

¹ Steam turbine and combustion turbine

Flexibility can be a critical Moonshot investment area for NYPA over the next four years.

- Flexibility market will need to grow significantly, up to ~\$700M in scale by 2025; of which ~15% is directly relevant to NYPA
- NYSERDA has already set a target of 1500MW of flexible storage in the State by 2025 (60MW currently) to support increasing amounts of intermittent renewables on the grid
- NYPA has many strengths that can address key challenges and barriers
 - Broad reach across the energy value chain and geography means that we can partner with utilities and the NYISO to aggregate and scale
 - Patient capital for making longer term investments and taking on higher risk
 - Customer base suitable for scaling solutions
 - Lead by example role in the delivery of the NYSERDA storage roadmap
 - Already making significant investments in flexibility

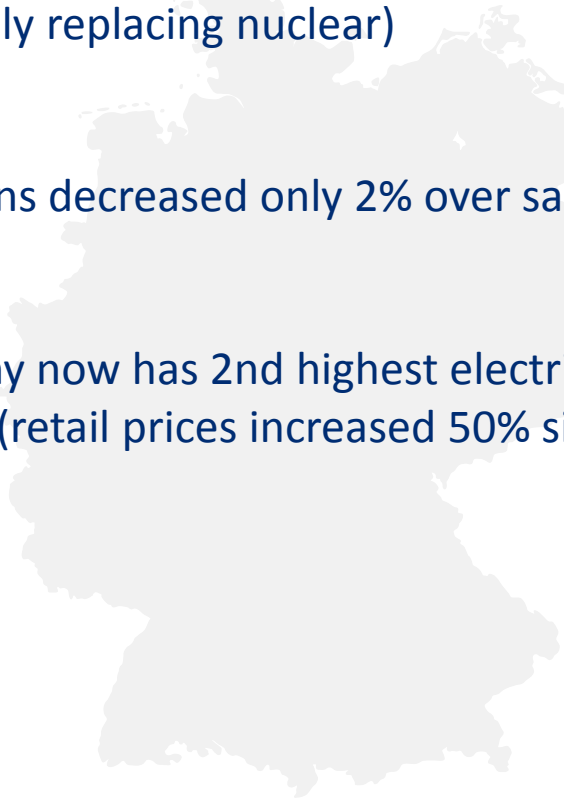
Large potential market that is dependent upon removing significant barriers over next 3-5 years

The experiences of other carbon free progressive geographies demonstrate a cautionary tale of not building flexibility into the grid in a timely fashion.

Germany example



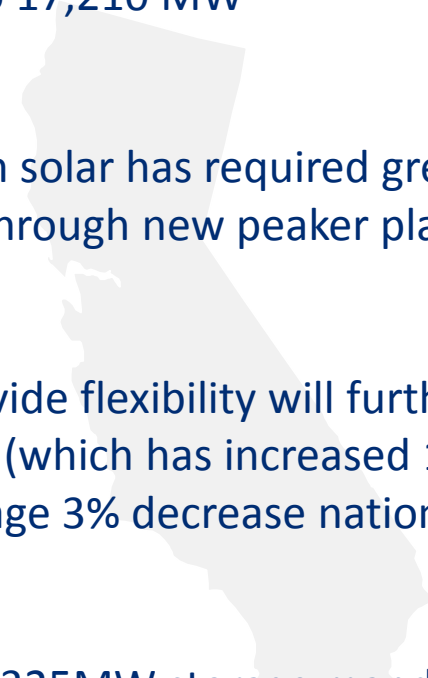
- Germany increased to 30% renewables in 2016 (primarily replacing nuclear)
- Emissions decreased only 2% over same period
- Germany now has 2nd highest electricity price in Europe (retail prices increased 50% since 2017)



California example



- California increased their renewables generation by 17% p.a. from 2011-2017 to 17,210 MW
- Intermittency from solar has required greater grid flexibility initially provided through new peaker plants
- New plants to provide flexibility will further drive up the cost of electricity in CA (which has increased 12% since 2008 compared to average 3% decrease nationwide)¹
- In 2013, CA set a 1325MW storage mandate for 2024



¹ Adjusted for inflation. Higher costs also driven by new transmission and distribution investments ² Ellwood and Puente Peaker Plant proposals

Source: Forbes: "Why Aren't Renewables Decreasing Germany's Carbon Emissions", Clean Energy Wire: "What German Households Pay for Power"; GTM "EIA Data Reveals Real and Growing Duck Curve"; California Energy Commission website, LA Times, Fortune: "Germany's High-Priced Energy Revolution", ClimateGroup: "How CA is Driving Energy Storage Market", Green Tech Media: "Will Energy Storage Replace Peaker Plants?", GTM: "NRG Asked to Suspend its Controversial Gas Plant"

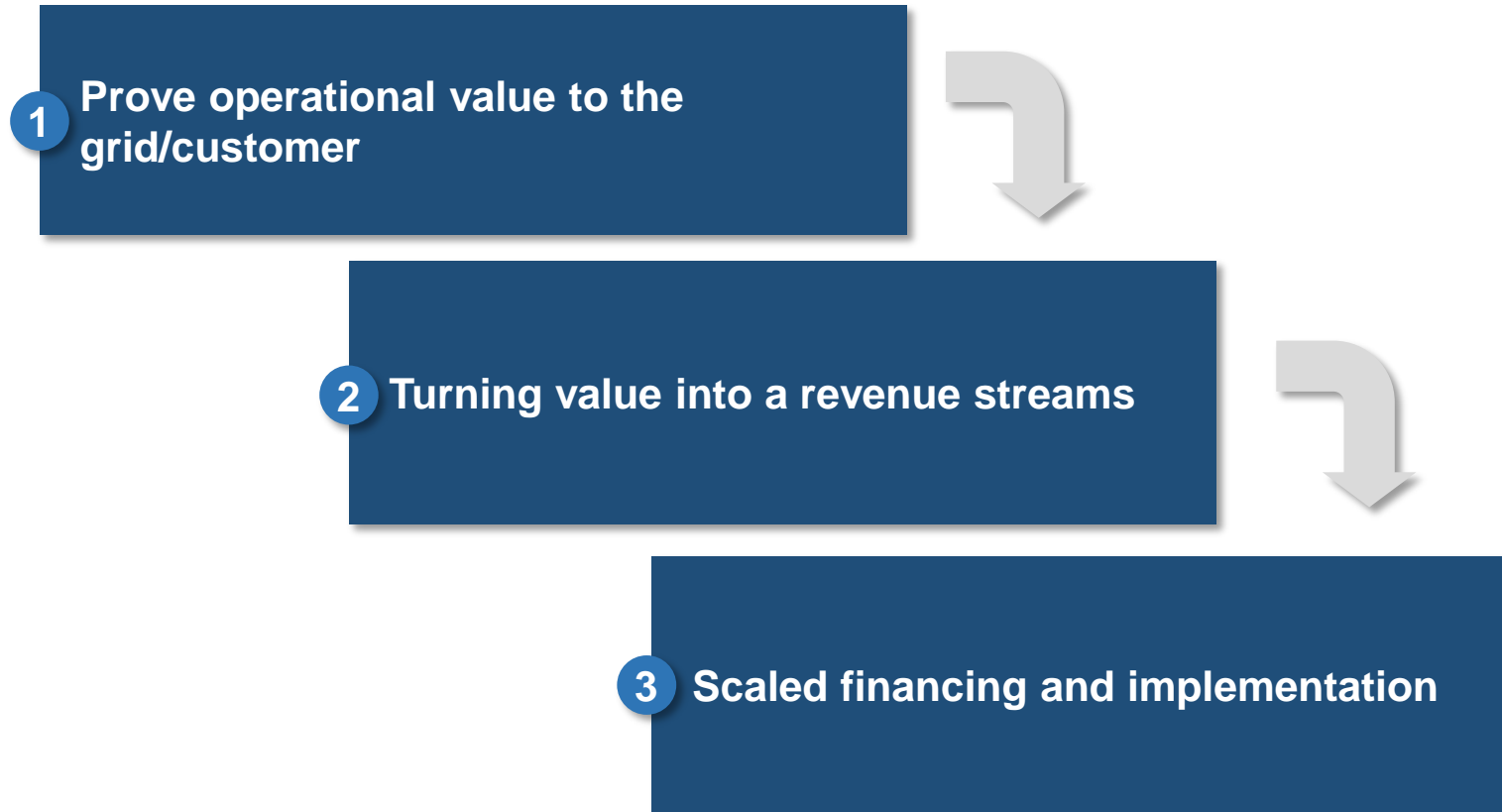


NY Power
Authority

Canal
Corporation

Several critical barriers and challenges exist today that are preventing flexibility resources from being implemented.

Phases of Maturity



The Moonshot will:

- Demonstrate how to compensate flexibility participants for value / revenue streams that don't yet exist by advancing products and services through these 3 steps
- Prepare NYPA to be responsive to flexibility market opportunities when they arise

Addressing key barriers and challenges will be at the center of our Flexibility Moonshot over the next four years.

We are actively engaging with key flexibility stakeholders in NY to better understand in what ways we can work with them to advance the market.

Stakeholder

Regulatory



Example Technology & Service Vendors



Flexibility Markets Makers



**The Business
Builder**



**Critical
partner**



**Accelerating
experimenter**

We are leveraging four in-flight NYPA projects to explore challenges and opportunities.

Grid-scale Zone D storage

20MW lithium ion battery plant installed at NYPA's Willis substation in NYISO Zone D.

Status: NYISO support – project to be approved by NYPA Trustees Oct 2018

What we will learn:

- Optimizing grid scale storage
- Value stacking
- Capabilities to expand

NYPA Role



Distribution storage aggregation

Multi site, same zone, customer storage aggregation project with Municipal customers (1-2MW total).

Status: Proposed to NYISO in Jan 2018 - renewed interest by NYISO this month

What we will learn:

- New control methodologies
- Scalable business model

NYPA Role



Customer behind the meter storage value

Testing DERMS through multiple small-scale (<1MW) storage installations with zone J and K customers.

Status: Customer engagement complete - NYPA creating proposal

What we will learn:

- Utilization of / integration with DERMS tools
- Optimize multiple value streams
- Scalable business model

NYPA Role



Demand Response Minimal Viable Product

Aggregate customer load to participate in a DR program utilizing NYEM and Project EDGE.

Status: Minimal Viable Product being designed – outreach with NYISO / utilities planned for Sept 2018

What we will learn:

- Importance of data analytics
- Cost of providing services
- New value streams

NYPA Role



Despite the lack of clarity around what the market place for flexibility is going to look like in the future, there are still opportunities for strategic investment today.

- The critical compensation challenges responsible for that lack of clarity will start to be resolved by FERC, the NYISO and PSC starting over the next 1.5 years
- In the meantime, we will report back in December with a four year investment plan that outlines:
 - A 2022 flexibility vision and project roadmap for NYPA including potential business models to explore
 - Partnership opportunities with utilities, third parties, the NYISO to test the operational value of flexibility services and how to scale
 - The path to building necessary capabilities in NYPA to respond to new flexibility opportunities when they materialize



**NY Power
Authority**

**Canal
Corporation**



**NY Power
Authority**

**Canal
Corporation**

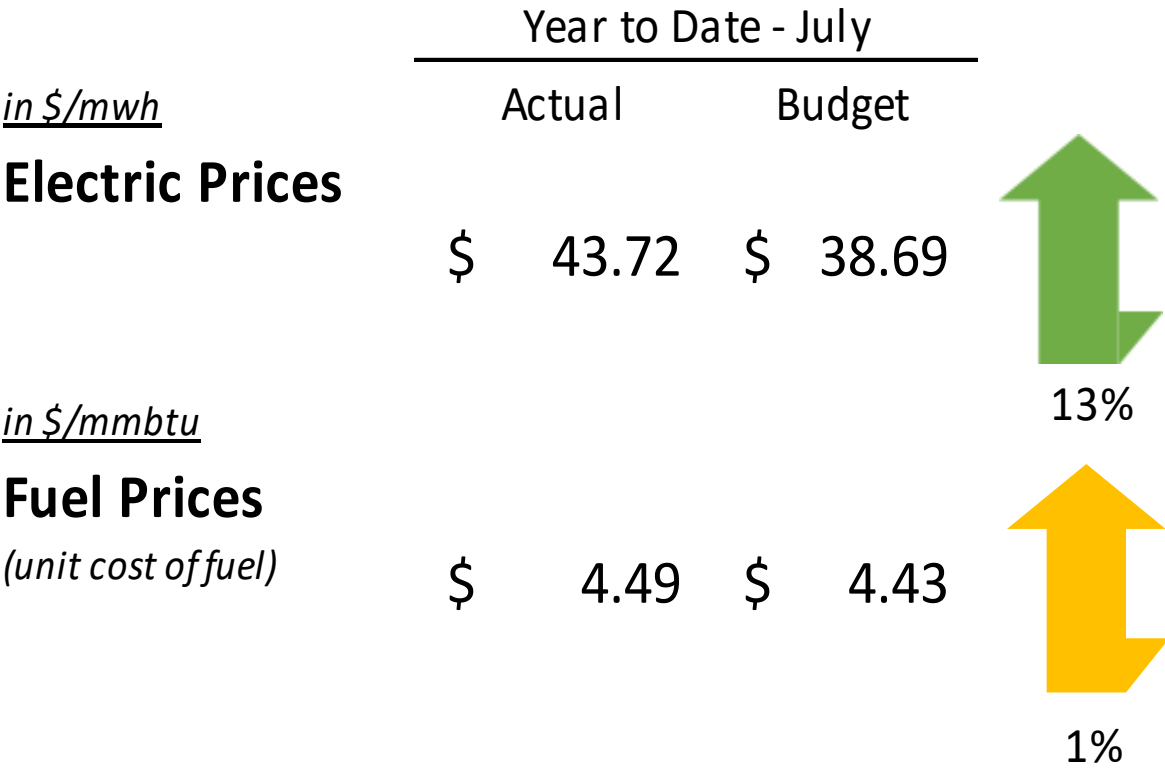
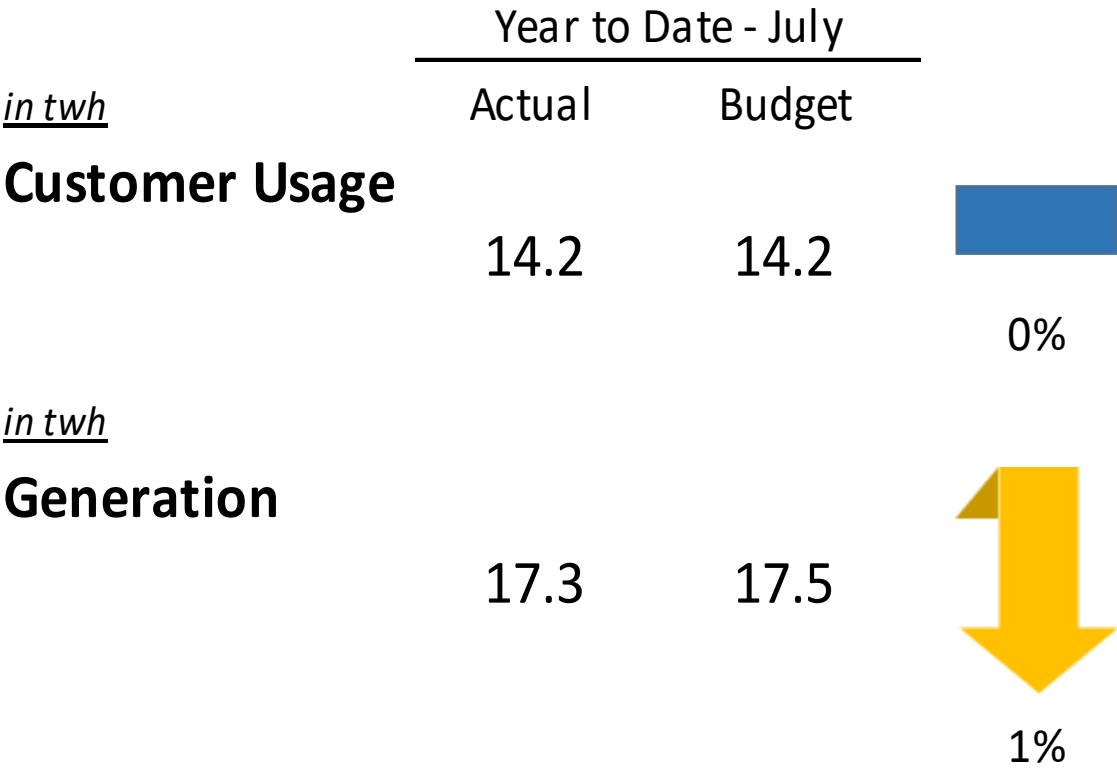
Exhibit 5d i-A
October 2, 2018

Commercial Operations Report

Sarah Salati, EVP Chief Commercial Officer

October 2, 2018

Commercial Operations: Wholesale



Commercial Operations: Economic Development






Recharge NY: 753 MW out of 910 MW allocated

All programs: 400,629 jobs, \$34 Billion capital committed

*data as of August 31, 2018

Commercial Operations: Customer

	Year to Date - July		
<i>in \$ millions</i>	Actual	Budget	
Customer Investments	147.0	99.8	 47%
<i>in \$ millions</i>			
Non-utility Revenues	11.2	8.4	 34%
<i>in \$ millions</i>			
Operating Expenses*	16.6	16.4	 1%
*Does not include outstanding project claims			



Rigging of a new high efficiency rooftop HVAC unit at LIRR Hillside Maintenance Facility